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May 20, 2015

Sent VIA OVERNIGHT DELIVERY

Mr. Rusty Lundberg
Division of Radiation Control
Utah Department of Environmental Quality
195 North 1950 West
P.O. Box 144850
Salt Lake City, UT 84114-4820

**Re: Transmittal of 1st Quarter 2015 Nitrate Monitoring Report
Stipulation and Consent Order Docket Number UGW12-04 White Mesa Uranium Mill**

Dear Mr. Lundberg:

Enclosed are two copies of the White Mesa Uranium Mill Nitrate Monitoring Report for the 1st Quarter of 2015 as required by the Stipulation and Consent Order Docket Number UGW12-04, as well as two CDs each containing a word searchable electronic copy of the report.

If you should have any questions regarding this report please contact me.

Yours very truly,

A handwritten signature in blue ink that reads 'Kathy Weinel'.

ENERGY FUELS RESOURCES (USA) INC.
Kathy Weinel
Quality Assurance Manager

cc: David C. Frydenlund
Dan Hillsten
Harold R. Roberts
David E. Turk
Scott Bakken

White Mesa Uranium Mill

Nitrate Monitoring Report

**State of Utah
Stipulated Consent Agreement, December 2014
Docket No. UGW12-04**

**1st Quarter
(January through March)
2015**

Prepared by:



**Energy Fuels Resources (USA) Inc.
225 Union Boulevard, Suite 600
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May 20, 2015

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ACRONYM LIST

AWAL	American West Analytical Laboratory
CA	Consent Agreement
CAP	Corrective Action Plan
CIR	Contamination Investigation Report
DIFB	Deionized Field Blanks
DRC	Utah Division of Radiation Control
EFRI	Energy Fuels Resources (USA) Inc.
ft amsl	feet above mean sea level
GWDP	Groundwater Discharge Permit
LCS	Laboratory Control Spike
MS	Matrix Spike
MSD	Matrix Spike Duplicate
QA	Quality Assurance
QAP	Groundwater Monitoring Quality Assurance Plan
QC	Quality Control
RPD	Relative Percent Difference
SCO	Stipulated Consent Order
SOPs	Standard Operating Procedures
UDEQ	Utah Department of Environmental Quality
VOC	Volatile Organic Compounds

1.0 INTRODUCTION

The Utah Department of Environmental Quality (“UDEQ”) Division of Radiation Control (“DRC”) noted in a Request dated September 30, 2008 (the “Request”), for a Voluntary Plan and Schedule to Investigate and Remediate Nitrate Contamination at the White Mesa Uranium Mill (the “Mill”) (the “Plan”), that nitrate levels have exceeded the State water quality standard of 10 mg/L in certain monitoring wells. As a result of the Request, Energy Fuels Resources (USA) Inc. (“EFRI”) entered into a Stipulated Consent Agreement with the Utah Water Quality Board in January 2009 which directed the preparation of a Nitrate Contamination Investigation Report (“CIR”). A subsequent letter dated December 1, 2009, among other things, recommended that EFRI also address elevated chloride concentrations in the CIR. The Stipulated Consent Agreement was amended in August 2011. Under the amended Consent Agreement (“CA”), EFRI submitted a Corrective Action Plan (“CAP”), pursuant to the requirements of the Utah Groundwater Quality Protection Rules [UAC R317-6-6.15(C – E)] on November 29, 2011 and revised versions of the CAP on February 27, 2012 and May 7, 2012. On December 12, 2012, DRC signed the Stipulation and Consent Order (“SCO”), Docket Number UGW12-04, which approved the EFRI CAP, dated May 7, 2012. The SCO ordered EFRI to fully implement all elements of the May 7, 2012 CAP.

Based on the schedule included in the CAP and as delineated and approved by the SCO, the activities associated with the implementation of the CAP began in January 2013. The reporting requirements specified in the CAP and SCO are included in this quarterly nitrate report.

This is the Quarterly Nitrate Monitoring Report, as required under the SCO, State of Utah Docket No. UGW12-04 for the first quarter of 2015. This report meets the requirements of the SCO, State of UDEQ Docket No. UGW12-04 and is the document which covers nitrate corrective action and monitoring activities during the first quarter of 2015.

2.0 GROUNDWATER NITRATE MONITORING

2.1 Samples and Measurements Taken During the Quarter

A map showing the location of all groundwater monitoring wells, piezometers, existing wells, temporary chloroform contaminant investigation wells and temporary nitrate investigation wells is attached under Tab A. Nitrate samples and measurements taken during this reporting period are discussed in the remainder of this section.

2.1.1 Nitrate Monitoring

Quarterly sampling for nitrate monitoring parameters was performed in the following wells:

TWN-1	TW4-24*
TWN-2	TW4-25*
TWN-3	Piezometer 1
TWN-4	Piezometer 2
TWN-7	Piezometer 3
TWN-18	
TW4-22*	

As discussed in Section 2.1.2 the analytical constituents required by the CAP are inorganic chloride and nitrate+nitrite as N (referred to as nitrate in this document)

* Wells TW4-22, TW4-24, TW4-25 are chloroform investigation wells (wells installed and sampled primarily for the chloroform investigation) and are sampled as part of the chloroform program. The analytical suite for these three wells includes nitrate, chloride and a select list of Volatile Organic Compounds (“VOCs”) as specified in the chloroform program. These three wells are included here because they are being pumped as part of the remediation of the nitrate contamination as required by the SCO and the CAP. The nitrate and chloride data are included in this report as well as in the chloroform program quarterly report. The VOC data for these three wells will be reported in the chloroform quarterly monitoring report only.

The December 12, 2012 SCO approved the CAP, which specified the cessation of sampling in TWN-5, TWN-6, TWN-8, TWN-9, TWN-10, TWN-11, TWN-12, TWN-13, TWN-14, TWN-15, TWN-16, TWN-17, and TWN-19. The CAP and SCO also approved the abandonment of TWN-5, TWN-8, TWN-9, TWN-10, TWN-11, TWN-12, TWN-13, TWN-15, and TWN-17 within 1 year of the SCO approval. These wells were abandoned in accordance with the DRC-approved Well Abandonment Procedure on July 31, 2013. Wells TWN-6, TWN-14, TWN-16, and TWN-19 have been maintained for depth to groundwater monitoring only, as noted in the CAP.

Table 1 provides an overview of all locations sampled during the current period, along with the date samples were collected from each location, and the date(s) upon which analytical data were received from the contract laboratory. Table 1 also identifies rinsate samples collected, as well as sample numbers associated with any required duplicates.

As indicated in Table 1, nitrate monitoring was performed in the nitrate monitoring wells, chloroform wells TW4-22, TW4-24, TW4-25 and Piezometers 1, 2, and 3. Analytical data for all of the above-listed wells, and the piezometers, are included in Tab G.

Nitrate and chloride are also monitored in all of the Mill’s groundwater monitoring wells and chloroform investigation wells. Data from those wells for this quarter are incorporated in certain maps and figures in this report but are discussed in their respective programmatic reports.

2.1.2 Parameters Analyzed

Locations sampled during this reporting period were analyzed for the following constituents:

- Inorganic Chloride
- Nitrate plus Nitrite as Nitrogen (referred to herein as nitrate)

Use of analytical methods consistent with the requirements found in the White Mesa Mill Groundwater Quality Assurance Plan, (“QAP”) Revision 7.2, dated June 6, 2012 was confirmed for all analytes, as discussed later in this report.

2.1.3 Groundwater Head and Level Monitoring

Depth to groundwater was measured in the following wells and/or piezometers, pursuant to Part I.E.3 of the Groundwater Discharge Permit (“GWDP”) (dated August 24, 2012):

- The quarterly groundwater compliance monitoring wells
- Existing well MW-4 and all of the temporary chloroform investigation wells
- Piezometers – P-1, P-2, P-3, P-4 and P-5
- MW-20, MW-22, and MW-34
- The DR piezometers that were installed during the Southwest Hydrogeologic Investigation
- Nitrate wells TWN-1, TWN-2, TWN-3, TWN-4, TWN-6, TWN-7, TWN-14, TWN-16, TWN-18 and TWN-19

In addition to the above, depth to water measurements are routinely observed in conjunction with sampling events for all wells sampled during quarterly and accelerated efforts, regardless of the sampling purpose.

All well levels used for groundwater contour mapping were measured and recorded within 5 calendar days of each other as indicated by the measurement dates in the summary sheet under Tab C. Field data sheets for groundwater measurements are also provided in Tab C.

Weekly and monthly depth to groundwater measurements were taken in the chloroform pumping wells MW-4, MW-26, TW4-19, TW4-20, TW4-4, TW4-01, TW4-02, and TW4-11, and the nitrate pumping wells TW4-22, TW4-24, TW4-25, and TWN-2. The UDEQ Groundwater Corrective Action Plan for Chloroform Plume Remediation (the “GCAP”) dated December 18, 2014 and awaiting final approval, requires that chloroform monitoring wells TW4-01, TW4-02, and TW4-11 be converted to pumping wells. In anticipation of final approval of the GCAP, EFRI converted TW4-01, TW4-02, and TW4-11 to pumping wells and began pumping on January 14, 2015.

In addition, monthly water level measurements were taken in non-pumping wells MW-27, MW-30, MW-31, TW4-21, TWN-1, TWN-3, TWN-4, TWN-7, and TWN-18 as required by the CAP.

2.2 Sampling Methodology and Equipment and Decontamination Procedures

The QAP provides a detailed presentation of procedures utilized for groundwater sampling activities under the GWDP (August 24, 2012).

The sampling methodology, equipment and decontamination procedures that were performed for the nitrate contaminant investigation, as summarized below, are consistent with the QAP.

2.2.1 Well Purging, Sampling and Depth to Groundwater

A list of the wells in order of increasing nitrate contamination is generated quarterly. The order for purging is thus established. The list is included with the Field Data Worksheets under Tab B. Mill personnel start purging with all of the nondetect wells and then move to the wells with detectable nitrate concentrations, progressing from the wells having the lowest nitrate contamination to wells with the highest nitrate contamination.

Before leaving the Mill office, the pump and hose are decontaminated using the cleaning agents described in Attachment 2-2 of the QAP. Rinsate blanks are collected at a frequency of one rinsate per 20 field samples.

Purging is completed to remove stagnant water from the casing and to assure that representative samples of formation water are collected for analysis. There are three purging strategies specified in the QAP that are used to remove stagnant water from the casing during groundwater sampling at the Mill. The three strategies are as follows:

1. Purging three well casing volumes with a single measurement of field parameters
2. Purging two casing volumes with stable field parameters (within 10% Relative Percent Difference ["RPD"])
3. Purging a well to dryness and stability (within 10% RPD) of a limited list of field parameters after recovery.

Mill personnel proceed to the first well, which is the well with the lowest concentration (i.e. nondetect) of nitrate based on the previous quarter's sampling results. Well depth measurements are taken and the one casing volume is calculated. The purging strategy that will be used for the well is determined at this time based on the depth to water measurement and the previous production of the well. The Grundfos pump (a 6 to 10 gallon per minute [gpm] pump) is then lowered to the appropriate depth in the well and purging is started. At the first well, the purge rate is measured for the purging event by using a calibrated 5 gallon bucket. After the evacuation of the well has been completed, the well is sampled when possible, and the pump is removed from the well and the process is repeated at each well location moving from the least contaminated to most contaminated well. If sample collection is not possible due to the well being purged dry, a sample is collected after recovery using a disposable bailer and as described in Attachment 2-3 of the QAP. Sample collection follows the procedures described in Attachment 2-4 of the QAP.

After the samples have been collected for a particular well, the samples are placed into a cooler that contains ice. The well is then recapped and Mill personnel proceed to the next well. If a bailer has been used it is disposed of.

Decontamination of non-dedicated equipment, using the reagents in Attachment 2-2 of the QAP, is performed between each sample location, and at the beginning of each sampling day, in addition to the pre-event decontamination described above.

2.2.2 Piezometer Sampling

Samples are collected from Piezometers 1, 2 and 3, if possible. Samples are collected from piezometers using a disposable bailer after one set of field measurements have been collected. Due to the difficulty in obtaining samples from the piezometers, the purging protocols set out in the QAP are not followed.

After samples are collected, the bailer is disposed of and samples are placed into a cooler containing ice for sample preservation and transit to the Mill's contract analytical laboratory, American West Analytical Laboratories ("AWAL").

2.3 Field Data

Attached under Tab B are copies of all Field Data Worksheets that were completed during the quarter for the nitrate investigation monitoring wells and piezometers identified in Section 2.1.1 and Table 1.

2.4 Depth to Groundwater Data and Water Table Contour Map

Depth-to-groundwater measurements that were utilized for groundwater contours are included on the Quarterly Depth to Water Sheet at Tab C of this Report along with the kriged groundwater contour map for the current quarter generated from this data. All well levels used for groundwater contour mapping were measured and recorded within 5 calendar days of each other as indicated by the measurement dates in the summary sheet under Tab C. A copy of the kriged groundwater contour map generated from the previous quarter's data is provided under Tab D.

2.5 Laboratory Results

2.5.1 Copy of Laboratory Results

The analytical results were provided by AWAL. Table 1 lists the dates when analytical results were reported to the Quality Assurance ("QA") Manager for each well or other sample.

Analytical results for the samples collected for this quarter's nitrate investigation and a limited list of chloroform investigation nitrate and chloride results are provided under Tab G of this Report. Also included under Tab G are the results of analyses for duplicate samples and rinsate samples for this sampling effort, as identified in Table 1. See the Groundwater Monitoring Report and Chloroform Monitoring Report for this quarter for nitrate and chloroform analytical results for the groundwater monitoring wells and chloroform investigation wells not listed in Table 1.

2.5.2 Regulatory Framework

As discussed in Section 1.0 above, the Request, Plan, and CA each triggered a series of actions on EFRI's part. Potential surficial sources of nitrate and chloride have been described in the December 30, 2009 CIR and additional investigations into potential sources were completed and discussed with DRC in 2011. Pursuant to the CA, the CAP was submitted to the Director of the Division of Radiation Control (the "Director") on May 7, 2012. The CAP describes activities associated with the nitrate in groundwater. The CAP was approved by the Director on December 12, 2012. This quarterly report documents the monitoring consistent with the program described in the CAP.

3.0 QUALITY ASSURANCE AND DATA VALIDATION

EFRI's QA Manager performed a QA/Quality Control ("QC") review to confirm compliance of the monitoring program with the requirements of the QAP. As required in the QAP, data QA includes preparation and analysis of QC samples in the field, review of field procedures, an analyte completeness review, and QC review of laboratory data methods and data. Identification of field QC samples collected and analyzed is provided in Section 3.1. Discussion of adherence to Mill sampling Standard Operating Procedures ("SOPs") is provided in Section 3.2. Analytical completeness review results are provided in Section 3.3. The steps and tests applied to check field data QA/QC, holding times, receipt temperature and laboratory data QA/QC are discussed in Sections 3.4.1 through 3.4.7 below.

The analytical laboratory has provided summary reports of the analytical QA/QC measurements necessary to maintain conformance with National Environmental Laboratory Accreditation Conference certification and reporting protocol. The Analytical Laboratory QA/QC Summary Reports, including copies of the Mill's Chain of Custody and Analytical Request Record forms for each set of Analytical Results, follow the analytical results under Tab G. Results of the review of the laboratory QA/QC information are provided under Tab H and discussed in Section 3.4, below.

3.1 Field QC Samples

The following QC samples were generated by Mill personnel and submitted to the analytical laboratory in order to assess the quality of data resulting from the field sampling program.

Field QC samples for the nitrate investigation program consist of one field duplicate sample for each 20 samples, DI Field Blanks ("DIFB"), and equipment rinsate samples.

During the quarter, one duplicate sample was collected as indicated in Table 1. The duplicate was sent blind to the analytical laboratory and analyzed for the same parameters as the nitrate wells.

One rinsate blank sample was collected as indicated on Table 1. Rinsate samples are labeled with the name of the subsequently purged well with a terminal letter "R" added (e.g. TWN-7R).

The field QC sample results are included with the routine analyses under Tab G.

3.2 Adherence to Mill Sampling SOPs

The QA Manager review of Mill Personnel's adherence to the existing SOPs, confirmed that the QA/QC requirements established in the QAP and Chloroform QAP were met.

3.3 Analyte Completeness Review

All analyses required by the GWDP for nitrate monitoring for the period were performed.

3.4 Data Validation

The QAP and GWDP (August 24, 2012) identify the data validation steps and data QC checks required for the nitrate monitoring program. Consistent with these requirements, the QA Manager performed the following evaluations: a field data QA/QC evaluation, a holding time evaluation, an analytical method check, a reporting limit evaluation, a QC evaluation of sample duplicates, a QC evaluation of control limits for analysis and blanks, a receipt temperature evaluation, and a rinsate evaluation. Because no VOCs are analyzed for the nitrate contamination investigation, no trip blanks are required in the sampling program. Each evaluation is discussed in the following sections. Data check tables indicating the results of each test are provided under Tab H.

3.4.1 Field Data QA/QC Evaluation

The QA Manager performs a review of all field recorded parameters to assess their adherence with QAP requirements. The assessment involved review of two sources of information: the Field Data Sheets and the Quarterly Depth to Water summary sheet. Review of the Field Data Sheets addresses well purging volumes and stability of five parameters: conductance, pH, temperature, redox potential, and turbidity. Review of the Depth to Water data confirms that all depth measurements used for development of groundwater contour maps were conducted within a five-day period of each other. The results of this quarter's review are provided under Tab H.

Based upon the review of the field data sheets, field work conformed with the QAP purging and field measurement requirements. A summary of the purging techniques employed and field measurements taken is described below:

Purging Two Casing Volumes with Stable Field Parameters (within 10% RPD)

Wells TWN-01, TWN-04, and TWN-18 were sampled after two casing volumes were removed. Field parameters pH, specific conductivity, turbidity, water temperature, and redox potential were measured during purging. All field parameters for this requirement were stable within 10% RPD.

Purging a Well to Dryness and Stability of a Limited List of Field Parameters

Wells TWN-03 and TWN-07 were purged to dryness before two casing volumes were evacuated. After well recovery, one set of measurements for the field parameters of pH, specific conductivity, and water temperature only were taken; the samples were collected, and another set of measurements for pH, specific conductivity, and water temperature were taken. Stabilization

of pH, conductivity and temperature are required within 10% RPD under the QAP. All field parameters for this requirement were stable within 10% RPD.

Continuously Pumped Wells

Wells TWN-02, TW4-22, TW4-24, and TW4-25 are continuously pumped wells. These wells are pumped on a set schedule per the remediation plan and are considered sufficiently evacuated to immediately collect a sample. As previously noted, TW4-22, TW4-24, and TW4-25 are chloroform investigation wells and are sampled under the chloroform program. Data for nitrate and chloride are provided here for completeness purposes.

During review of the field data sheets, it was observed that sampling personnel consistently recorded depth to water to the nearest 0.01 foot.

All field parameters for all wells were within the QAP required limits, as indicated below.

The review of the field sheets for compliance with QAP requirements resulted in the observations noted below. The QAP requirements in Attachment 2-3 specifically state that field parameters must be stabilized to within 10% over at least 2 consecutive measurements for wells purged to two casing volumes or to dryness. The QAP Attachment 2-3 states that turbidity should be less than 5 NTU prior to sampling unless the well is characterized by water that has a higher turbidity. The QAP Attachment 2-3 does not require that turbidity measurements be less than 5 NTU prior to sampling. As such the noted observations regarding turbidity measurements greater than 5 NTU below are included for information purposes only.

- All well measurements met the QAP's 5 NTU turbidity goal and all required turbidity RPD's met the QAP Requirement to stabilize within 10%, as noted in Tab H.

EFRI's letter to DRC of March 26, 2010 discusses further why turbidity does not appear to be an appropriate parameter for assessing well stabilization. In response to DRC's subsequent correspondence dated June 1, 2010 and June 24, 2010, EFRI completed a monitoring well redevelopment program. The redevelopment report was submitted to DRC on September 30, 2011. DRC responded to the redevelopment report via letter on November 15, 2012. Per the DRC letter dated November 15, 2012, the field data generated this quarter are compliant with the turbidity requirements of the approved QAP.

3.4.2 Holding Time Evaluation

QAP Table 1 identifies the method holding times for each suite of parameters. Sample holding time checks are provided in Tab H. All samples were received and analyzed within the required holding time.

3.4.3 Analytical Method Checklist

All analytical methods reported by the laboratory were checked against the required methods enumerated in the QAP. Analytical method checks are provided in Tab H. All methods were consistent with the requirements of the QAP.

3.4.4 Reporting Limit Evaluation

All analytical method reporting limits (“RLs”) reported by the laboratory were checked against the reporting limits enumerated in the QAP. Reporting Limit Checks are provided in Tab H. All analytes were measured and reported to the required reporting limits, with the exception of several samples that had increased reporting limits due to matrix interference or required dilution due to the sample concentration. However, in all of those cases the analytical results were greater than the reporting limit used.

3.4.5 QA/QC Evaluation for Sample Duplicates

Section 9.1.4 a) of the QAP states that RPDs will be calculated for the comparison of duplicate and original field samples. The QAP acceptance limits for RPDs between the duplicate and original field sample is less than or equal to 20% unless the measured results are less than 5 times the required detection limit. This standard is based on the EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, February 1994, 9240.1-05-01 as cited in the QAP. The RPDs are calculated for duplicate pairs for all analytes regardless of whether or not the reported concentrations are greater than 5 times the required detection limits. However, data will be considered noncompliant only when the results are greater than 5 times the required detection limit and the RPD is greater than 20%.

The duplicate results were within a 20% RPD. Results of the RPD test are provided in Tab H.

3.4.6 Other Laboratory QA/QC

Section 9.2 of the QAP requires that the laboratory’s QA/QC Manager check the following items in developing data reports: (1) sample preparation information is correct and complete, (2) analysis information is correct and complete, (3) appropriate Analytical Laboratory procedures are followed, (4) analytical results are correct and complete, (5) QC samples are within established control limits, (6) blanks are within QC limits, (7) special sample preparation and analytical requirements have been met, and (8) documentation is complete. In addition to other laboratory checks described above, EFRI’s QA Manager rechecks QC samples and blanks (items (5) and (6)) to confirm that the percent recovery for spikes and the relative percent difference for spike duplicates are within the method-specific required limits, or that the case narrative sufficiently explains any deviation from these limits. Results of this quantitative check are provided in Tab H.

The lab QA/QC results met these specified acceptance limits.

The QAP Section 8.1.2 requires that a Matrix Spike/Matrix Spike Duplicate (“MS/MSD”) pair be analyzed with each analytical batch. The QAP does not specify acceptance limits for the MS/MSD pair, and the QAP does not specify that the MS/MSD pair be prepared on EFRI samples only. Acceptance limits for MS/MSDs are set by the laboratories. The review of the information provided by the laboratories in the data packages verified that the QAP requirement to analyze an MS/MSD pair with each analytical batch was met. While the QAP does not require it, the recoveries were reviewed for compliance with the laboratory established acceptance limits. The QAP does not require this level of review, and the results of this review are provided for information only.

The information from the Laboratory QA/QC Summary Reports indicates that the MS/MSDs recoveries and the associated RPDs for the samples were within acceptable laboratory limits for the regulated compounds except as indicated in Tab H. The MS/MSD recoveries that are outside the laboratory established acceptance limits do not affect the quality or usability of the data because recoveries above or below the acceptance limits are indicative of matrix interference. Matrix interferences are applicable to the individual sample results only. The requirement in the QAP to analyze a MS/MSD pair with each analytical batch was met and as such the data are compliant with the QAP.

The information from the Laboratory QA/QC Summary Reports indicates that the Laboratory Control Sample recoveries were acceptable, which indicate that the analytical system was operating properly.

The QAP Section 8.1.2 requires that each analytical batch shall be accompanied by a reagent blank. All analytical batches routinely contain a blank, which is a laboratory-grade water blank sample made and carried through all analytical steps. For the Mill samples, a method blank is prepared for all analytical methods. The information from the Laboratory QA/QC Summary Reports indicates that the method blanks did not contain detections of any target analytes above the Reporting Limit.

3.4.7 Receipt Temperature Evaluation

Chain of Custody sheets were reviewed to confirm compliance with the QAP requirement in QAP Table 1 that samples be received at 6°C or lower. Sample temperatures checks are provided in Tab H. All samples were received within the required temperature limit.

3.4.8 Rinsate Check

Rinsate checks are provided in Tab H. A comparison of the rinsate blank sample concentration levels to the QAP requirements – that rinsate sample concentrations be one order of magnitude lower than that of the actual well – indicated that all of the rinsate blank analytes met this criterion. All rinsate and DIFB blank samples were non-detect for the quarter.

4.0 INTERPRETATION OF DATA

4.1 Interpretation of Groundwater Levels, Gradients and Flow Directions.

4.1.1 Current Site Groundwater Contour Map

As stated above, a listing of groundwater level readings for the current quarter (shown as depth to groundwater in feet) is included under Tab C. The data from this tab has been interpreted (interpolated by kriging) and plotted in a water table contour map, provided under the same tab. The contour map is based on the current quarter's data for all wells.

The water level contour map indicates that perched water flow ranges from generally southwesterly beneath the Mill site and tailings cells to generally southerly along the eastern and western margins of White Mesa. Perched water mounding associated with the wildlife ponds

locally changes the generally southerly perched water flow patterns. For example, northeast of the Mill site, mounding associated with wildlife ponds results in locally northerly flow near PIEZ-1. The impact of the mounding associated with the northern ponds, to which water has not been delivered since March 2012, is diminishing and is expected to continue to diminish as the mound decays due to reduced recharge.

Not only has recharge from the wildlife ponds impacted perched water elevations and flow directions at the site, but the cessation of water delivery to the northern ponds, which are generally upgradient of the nitrate and chloroform plumes at the site, has resulted in changing conditions that are expected to impact constituent concentrations and migration rates within the plumes. Specifically, past recharge from the ponds has helped limit many constituent concentrations within the plumes by dilution while the associated groundwater mounding has increased hydraulic gradients and contributed to plume migration. Since use of the northern wildlife ponds ceased in March 2012, the reduction in recharge and decay of the associated groundwater mound are expected to increase many constituent concentrations within the plumes while reducing hydraulic gradients and acting to reduce rates of plume migration. EFRI and its consultants have raised the issues and potential effects associated with cessation of water delivery to the northern wildlife ponds during discussions with DRC in March 2012 and May 2013.

The impacts associated with cessation of water delivery to the northern ponds are expected to propagate downgradient (south and southwest) over time. Wells close to the ponds are generally expected to be impacted sooner than wells farther downgradient of the ponds. Therefore, constituent concentrations are generally expected to increase in downgradient wells close to the ponds before increases are detected in wells farther downgradient of the ponds. Although such increases are anticipated to result from reduced dilution, the magnitude and timing of the increases are difficult to predict due to the complex permeability distribution at the site and factors such as pumping and the rate of decay of the groundwater mound. The potential exists for some wells completed in higher permeability materials to be impacted sooner than some wells completed in lower permeability materials even though the wells completed in lower permeability materials may be closer to the ponds.

Localized increases in concentrations of constituents such as nitrate and chloride within and near the nitrate plume may occur even when the nitrate plume is under control based on the Nitrate CAP requirements. Ongoing mechanisms that can be expected to increase the concentrations of nitrate and chloride locally as a result of reduced wildlife pond recharge include but are not limited to:

- 1) Reduced dilution - the mixing of low constituent concentration pond recharge into existing perched groundwater will be reduced over time.
- 2) Reduced saturated thicknesses – dewatering of higher permeability zones receiving primarily low constituent concentration pond water will result in wells intercepting the zones receiving a smaller proportion of the low constituent concentration water.

The combined impact of the above two mechanisms may be especially evident at chloroform pumping wells MW-4, MW-26, TW4-4, TW4-19, and TW4-20; nitrate pumping wells TW4-22, TW4-24, TW4-25, and TWN-2; and non-pumped wells adjacent to the pumped wells. The

overall impact is expected to be generally higher constituent concentrations in these wells over the short term until mass reduction resulting from pumping and natural attenuation eventually reduce concentrations.

In addition to changes in the flow regime caused by reduced wildlife pond recharge, perched flow directions are locally influenced by operation of the chloroform and nitrate pumping wells. As shown in the detail water level map provided under Tab C, well defined cones of depression are evident in the vicinity of all chloroform pumping wells except TW4-4, which began pumping in the first quarter of 2010. Although operation of chloroform pumping well TW4-4 has depressed the water table in the vicinity of TW4-4, a well-defined cone of depression is not clearly evident. The lack of a well-defined cone of depression near TW4-4 likely results from 1) variable permeability conditions in the vicinity of TW4-4, and 2) persistent relatively low water levels at adjacent well TW4-14.

Wells TW4-1, TW4-2, and TW4-11 were added to the chloroform pumping network this quarter, and have lowered water levels east of the nitrate plume in the general vicinity of chloroform pumping well MW-4. Decreases in water levels were especially evident at non-pumping wells TW4-7 and TW4-8.

Pumping of nitrate wells TW4-22, TW4-24, TW4-25, and TWN-2 began during the first quarter of 2013. Water level patterns near these wells are expected to be influenced by the presence of and the decay of the groundwater mound associated with the northern wildlife ponds, and by the persistently low water level elevation at TWN-7, which is located upgradient of the nitrate pumping wells.

Capture associated with nitrate pumping is expected to increase over time as water levels decline due to pumping and to cessation of water delivery to the northern wildlife ponds. Interaction between nitrate and chloroform pumping is expected to enhance the capture of the nitrate pumping system. The long term interaction between the nitrate and chloroform pumping systems will, however, require more data to be collected as part of routine monitoring.

As discussed above, variable permeability conditions are one likely reason for the lack of a well-defined cone of depression near chloroform pumping well TW4-4. Changes in water levels at wells immediately south of TW4-4 resulting from TW4-4 pumping are expected to be muted because TW4-4 is located at a transition from relatively high to relatively low permeability conditions south (downgradient) of TW4-4. The permeability of the perched zone at TW4-6 and TW4-26, and recently installed wells TW4-29, TW4-30, TW4-31, TW4-33, TW4-34, and TW4-35 is one to two orders of magnitude lower than at TW4-4. Any drawdown of water levels at wells immediately south of TW4-4 resulting from TW4-4 pumping is also difficult to determine because of the general, long-term increase in water levels in this area that resulted from wildlife pond recharge.

Water levels at TW4-4 and TW4-6 increased by nearly 2.7 and 2.9 feet, respectively, between the fourth quarter of 2007 and the fourth quarter of 2009 (just prior to the start of TW4-4 pumping) at rates of approximately 1.2 feet/year and 1.3 feet/year, respectively. However, the rate of increase in water level at TW4-6 after the start of pumping at TW4-4 (first quarter of 2010) was reduced to less than 0.5 feet/year suggesting that TW4-6 is within the hydraulic

influence of TW4-4. Furthermore, water levels at TW4-6 have been trending downward since the fourth quarter of 2013 suggesting an additional influence related to the cessation of water delivery to the northern wildlife ponds as discussed above. (note: hydrographs for these wells are provided in the quarterly Chloroform Monitoring Report). Recharge from the southern wildlife pond is expected to continue to have an effect on water levels near TW4-4 even as the groundwater mound associated with recharge from the northern ponds diminishes over time due to cessation of water delivery to those ponds.

The lack of a well-defined cone of depression at TW4-4 is also influenced by the persistent, relatively low water level at non-pumping well TW4-14, located east of TW4-4 and TW4-6. For the current quarter, the water level at TW4-14 was measured at approximately 5530.9 feet above mean sea level (“ft amsl”). This is approximately 7 feet lower than the water level at TW4-6 (approximately 5538.0 ft amsl) and 11 feet lower than the water level at TW4-4 (approximately 5541.5 ft amsl) even though TW4-4 is pumping.

Well TW4-27 (installed south of TW4-14 in the fourth quarter of 2011) has a static water level of approximately 5527.7 ft amsl, similar to TW4-14 (approximately 5530.9 ft amsl). Prior to the installation of TW4-27, the persistently low water level at TW4-14 was considered anomalous because it appeared to be downgradient of all three wells TW4-4, TW4-6, and TW4-26, yet chloroform had not been detected at TW4-14. Chloroform had apparently migrated from TW4-4 to TW4-6 and from TW4-6 to TW4-26 which suggested that TW4-26 was actually downgradient of TW4-6, and TW4-6 was actually downgradient of TW4-4, regardless of the flow direction implied by the low water level at TW4-14. The water level at TW4-26 (5536.4 feet amsl) is, however, lower than water levels at adjacent wells TW4-6 (5538.0 feet amsl), and TW4-23 (5539.5 feet amsl), as shown in the detail water level map under Tab C.

Hydraulic tests indicate that the permeability at TW4-27 is an order of magnitude lower than at TW4-6 and three orders of magnitude lower than at TW4-4 (see Hydro Geo Chem, Inc. [HGC], September 20, 2010: Hydraulic Testing of TW4-4, TW4-6, and TW4-26, White Mesa Uranium Mill, July 2010; and HGC, November 28, 2011: Installation, Hydraulic Testing, and Perched Zone Hydrogeology of Perched Monitoring Well TW4-27, White Mesa Uranium Mill Near Blanding, Utah). The similar water levels at TW4-14 and TW4-27, and the low permeability estimate at TW4-27 suggest that both wells are completed in materials having lower permeability than nearby wells. The low permeability condition likely reduced the rate of long-term water level increase at TW4-14 and TW4-27 compared to nearby wells, yielding water levels that appeared anomalously low. This behavior is consistent with hydraulic test data collected from recently installed wells TW4-29, TW4-30, TW4-31, TW4-33 and TW4-34 which indicate that the permeability of these wells is one to two orders of magnitude higher than the permeability of TW4-27 (see HGC, January 23, 2014; Contamination Investigation Report, TW4-12 and TW4-27 Areas, White Mesa Uranium Mill Near Blanding, Utah; and HGC, July 1, 2014, Installation and Hydraulic Testing of TW4-35 and TW4-36, White Mesa Uranium Mill Near Blanding, Utah [As-Built Report]). Hydraulic tests also indicate that the permeability at TW4-36 is slightly higher than but comparable to the low permeability at TW4-27, suggesting that TW4-36, TW4-14 and TW4-27 are completed in a continuous low permeability zone.

4.1.2 Comparison of Current Groundwater Contour Map to Groundwater Contour Map for Previous Quarter

The groundwater contour maps for the Mill site for the previous quarter, as submitted with the Nitrate Monitoring Report for the previous quarter, are attached under Tab D.

A comparison of the water table contour maps for the current quarter (first quarter of 2015) to the water table contour maps for the previous quarter (fourth quarter of 2014) indicates relatively large drawdowns (decreases in water levels) associated with operation of new chloroform pumping wells TW4-1, TW4-2, and TW4-11. Smaller increases in drawdown occurred at nearby chloroform pumping wells MW-4 and TW4-4. Drawdowns associated with chloroform pumping wells TW4-19 and TW4-20 decreased this quarter.

Nitrate pumping wells TW4-22, TW4-24, TW4-25, and TWN-2 were brought into operation during the first quarter of 2013 and their impact on water level patterns was evident as of the fourth quarter of 2013. While water levels in nitrate pumping well TW4-22 showed a decrease, the water levels at TW4-24, TW4-25, and TWN-2 showed increases this quarter.

As discussed in Section 4.1.1, pumping at chloroform well TW4-4, which began in the first quarter of 2010, has depressed the water table near TW4-4, but a well-defined cone of depression is not clearly evident, likely due to variable permeability conditions near TW4-4 and the persistently low water level at adjacent well TW4-14.

Small (<1 foot) changes in water levels were reported at the majority of site wells; water levels and water level contours for the site have not changed significantly since the last quarter except for a few locations primarily in the vicinity of the new chloroform pumping wells. Reported decreases in water levels (increases in drawdown) of approximately 4.2, 7.1, 2.2, 31, and 12 feet occurred in chloroform pumping wells TW4-1, TW4-2, TW4-4, and TW4-11, and nitrate pumping well TW4-22, respectively. Increases in water level (decreases in drawdown) of approximately 6.9, 5, 6.3, and 6.3 feet were reported for chloroform pumping wells MW-26, TW4-19, TW4-20, and nitrate pumping well TW4-25, respectively. Changes in water levels at other pumping wells (chloroform pumping well MW-4 and nitrate pumping well TW4-24) were less than 1 foot. Water level fluctuations at pumping wells typically occur in part because of fluctuations in pumping conditions just prior to and at the time the measurements are taken.

Although increases in water levels (decreases in drawdown) occurred in some pumping wells and decreases in water levels (increases in drawdown) occurred in others, and new chloroform pumping wells TW4-1, TW4-2, and TW4-11 were brought online, the overall apparent capture of the combined system is about the same as last quarter.

Reported water level decreases of less than 1 foot at Piezometers 1 through 3, TWN-1, TWN-4, TWN-6, TWN-18, and MW-19 may result from cessation of water delivery to the northern wildlife ponds as discussed in Section 4.1.1 and the consequent continuing decay of the associated perched water mound. Reported water level decreases of approximately 1.2 feet and 1.4 feet at Piezometers 4 and 5, respectively, may result from reduced recharge at the southern wildlife pond.

Reported water levels increased by approximately 4.3 feet at MW-20 and by approximately 2.5 feet at MW-37 between the previous quarter and the current quarter. Water level variability at these wells is likely the result of low permeability and variable intervals between purging/sampling and water level measurement. An increase in water level of approximately 2.9 feet was reported at DR-17; a similar decrease was reported last quarter. Water level decreases of approximately 4 feet and 8 feet at TW4-7 and TW4-8, respectively, are likely the result of the start-up of pumping at TW4-1, TW4-2, and TW4-11.

4.1.3 Hydrographs

Attached under Tab E are hydrographs showing groundwater elevation in each nitrate contaminant investigation monitor well over time. Per the CAP, nitrate wells TWN-6, TWN-14, TWN-16, and TWN-19 have been maintained for depth to groundwater monitoring only. These hydrographs are also included in Tab E.

4.1.4 Depth to Groundwater Measured and Groundwater Elevation

Attached in Tab F are tables showing depth to groundwater measured and groundwater elevation over time for each of the wells listed in Section 2.1.1 above.

4.2 Effectiveness of Hydraulic Containment and Capture

4.2.1 Hydraulic Containment and Control

The CAP states that hydraulic containment and control will be evaluated in part based on water level data and in part on concentrations in wells downgradient of pumping wells TW4-22 and TW4-24.

As per the CAP, the fourth quarter of 2013 was the first quarter that hydraulic capture associated with nitrate pumping wells TW4-22, TW4-24, TW4-25, and TWN-2 was evaluated. Hydraulic containment and control based on water level data is considered successful per the CAP if the entire nitrate plume upgradient of TW4-22 and TW4-24 falls within the combined capture of the nitrate pumping wells. Capture zones based on water level contours calculated by kriging the current quarter's water level data are provided on water level contour maps included under Tab C. The nitrate capture zones are defined by the bounding stream tubes associated with nitrate pumping wells. Each bounding stream tube represents a flow line parallel to the hydraulic gradient and therefore perpendicular to the intersected water level contours. Assuming that the stream tubes do not change over time, all flow between the bounding stream tubes associated with a particular pumping well is presumed to eventually reach and be removed by that well. Capture associated with chloroform pumping wells is also included on these maps because the influence of the chloroform and nitrate pumping systems overlap.

The specific methodology for calculating the nitrate capture zones is substantially the same as that used since the fourth quarter of 2005 to calculate the capture zones for the chloroform program, as agreed to by the DRC and International Uranium (USA) Corp. The procedure for calculating nitrate capture zones is as follows:

- 1) Calculate water level contours by gridding the water level data on approximately 50-foot centers using the ordinary linear kriging method in Surfer™. Default kriging parameters are used that include a linear variogram, an isotropic data search, and all the available water level data for the quarter, including relevant seep and spring elevations.
- 2) Calculate the capture zones by hand from the kriged water level contours following the rules for flow nets:
 - from each pumping well, reverse track the stream tubes that bound the capture zone of each well,
 - maintain perpendicularity between each stream tube and the kriged water level contours.

Compared to last quarter, both increases and decreases in water levels occurred at nitrate and chloroform pumping wells. The water level in nitrate pumping well TW4-22 decreased by nearly 12 feet. Water levels in nitrate pumping wells TW4-24, TW4-25, and TWN-2 increased by approximately 1 foot, 6 feet, and 4 feet, respectively. The water levels in chloroform pumping wells MW-4, TW4-1, TW4-2, TW4-4, and TW4-11 decreased by approximately 1 foot, 4 feet, 7 feet, 2 feet, and 31 feet, respectively, while water levels in chloroform pumping wells MW-26, TW4-19, and TW4-20 increased by approximately 7 feet, 5 feet, and 6 feet, respectively. While the apparent capture of the combined pumping systems has expanded in some areas and been reduced in others, the overall capture is about the same as last quarter.

The capture associated with nitrate pumping wells is expected to increase over time as water levels continue to decline due to pumping and to cessation of water delivery to the northern wildlife ponds. Slow development of hydraulic capture is consistent with and expected based on the relatively low permeability of the perched zone at the site. Furthermore, the presence of the perched groundwater mound, and the apparently anomalously low water level at TWN-7, will influence the definition of capture associated with the nitrate pumping system.

That pumping is likely sufficient to eventually capture the entire plume upgradient of TW4-22 and TW4-24 can be demonstrated by comparing the combined average pumping rates of all nitrate pumping wells for the current quarter to estimates of pre-pumping flow through the nitrate plume near the locations of TW4-22 and TW4-24. The pre-pumping flow calculation is assumed to represent a steady state 'background' condition that includes constant recharge, hydraulic gradients, and saturated thicknesses, and does not account for reduced recharge and saturated thickness caused by cessation of water delivery to the northern wildlife ponds since March, 2012. Changes after pumping are conservatively assumed to result only from pumping. As will be discussed below, the average combined nitrate pumping rate for the quarter is within the calculated pre-pumping range of perched water flow through the nitrate plume.

The cumulative volume of water removed by TW4-22, TW4-24, TW4-25, and TWN-2 during the current quarter was approximately 233,211 gallons. This equates to an average total extraction rate of approximately 1.8 gpm over the 90 day quarter. This average accounts for time periods when pumps were off due to insufficient water columns in the wells and accounts for the extended pumping outage discussed in Section 5. In part due to this outage, the volume of water removed by nitrate pumping was approximately 33% lower than last quarter. In addition to periodic outages resulting from unavoidable equipment downtime, achievable pumping rates are

likely to diminish over time as saturated thicknesses are reduced by pumping and by cessation of water delivery to the northern wildlife ponds.

Pre-pumping flow through the nitrate plume near TW4-22 and TW4-24 was estimated using Darcy's Law to lie within a range of approximately 1.31 gpm to 2.79 gpm. Calculations were based on an average hydraulic conductivity range of 0.15 feet per day (ft/day) to 0.32 ft/day (depending on the calculation method), a pre-pumping hydraulic gradient of 0.025 feet per foot (ft/ft), a plume width of 1,200 feet, and a saturated thickness (at TW4-22 and TW4-24) of 56 feet. The hydraulic conductivity range was estimated by averaging the results obtained from slug test data that were collected automatically by data loggers from wells within the plume and analyzed using the KGS unconfined slug test solution available in Aqtesolve™ (see Hydro Geo Chem, Inc. [HGC], August 3, 2005: Perched Monitoring Well Installation and Testing at the White Mesa Uranium Mill, April Through June 2005; HGC, March 10, 2009: Perched Nitrate Monitoring Well Installation and Hydraulic Testing, White Mesa Uranium Mill; and HGC, March 17 2009: Letter Report to David Frydenlund, Esq, regarding installation and testing of TW4-23, TW4-24, and TW4-25). These results are summarized in Table 6. Data from fourth quarter 2012 were used to estimate the pre-pumping hydraulic gradient and saturated thickness. These data are also summarized in Tables 7 and 8.

The average hydraulic conductivity was estimated to lie within a range of 0.15 ft/day to 0.32 ft/day. Averages were calculated four ways. As shown in Table 6 arithmetic and geometric averages for wells MW-30, MW-31, TW4-22, TW4-24, TW4-25, TWN-2, and TWN-3 were calculated as 0.22 and 0.15 ft/day, respectively. Arithmetic and geometric averages for a subset of these wells (MW-30, MW-31, TW4-22, and TW4-24) were calculated as 0.32 and 0.31 ft/day, respectively. The lowest value, 0.15 ft/day, represented the geometric average of the hydraulic conductivity estimates for all the plume wells. The highest value, 0.32 ft/day, represented the arithmetic average for the four plume wells having the highest hydraulic conductivity estimates (MW-30, MW-31, TW4-22, and TW4-24).

Pre-pumping hydraulic gradients were estimated at two locations; between TW4-25 and MW-31 (estimated as 0.023 ft/ft), and between TWN-2 and MW-30 (estimated as 0.027 ft/ft). These results were averaged to yield the value used in the calculation (0.025 ft/ft). The pre-pumping saturated thickness of 56 feet was an average of pre-pumping saturated thicknesses at TW4-22 and TW4-24.

The hydraulic gradient and saturated thickness used in the calculations are assumed to represent a steady state 'background' condition. However, assumption of a steady state 'background' is inconsistent with the cessation of water delivery to the northern wildlife ponds, located upgradient of the nitrate plume. Hydraulic gradients and saturated thicknesses within the plume are declining as a result of two factors: reduced recharge from the ponds, and the effects of nitrate pumping. Separating the impacts of nitrate pumping from the impacts of reduced recharge from the ponds is problematic. Should pumping cease and 'background' conditions be allowed to re-establish, however, smaller hydraulic gradients and saturated thicknesses would be expected due to reduced recharge, which would lower estimates of 'background' flow.

As a result, the 'background' flow calculated using the hydraulic gradient of 0.025 ft/ft and saturated thickness of 56 feet is considered conservatively large. Furthermore, using the

arithmetic average hydraulic conductivity of a subset of plume wells having the highest conductivities is considered less representative of actual conditions than using the geometric average conductivity of all of the plume wells. Therefore nitrate pumping likely exceeds flow through the plume by a factor greater than 1.4, the high end of the calculated range.

The CAP states that MW-5, MW-11, MW-30, and MW-31 are located downgradient of TW4-22 and TW4-24. MW-30 and MW-31 are within the plume near its downgradient edge and MW-5 and MW-11 are outside and downgradient of the plume. Per the CAP, hydraulic control based on concentration data will be considered successful if the concentrations of nitrate in MW-30 and MW-31 remain stable or decline, and concentrations of nitrate in downgradient wells MW-5 and MW-11 do not exceed the 10 mg/L standard.

Table 5 presents the nitrate concentration data for MW-30, MW-31, MW-5 and MW-11, which are down-gradient of pumping wells TW4-22 and TW4-24. Based on these concentration data, the nitrate plume is under control.

The plume has not migrated downgradient to MW-5 or MW-11 because nitrate was not detected at MW-11 and was detected at a concentration of only 0.2 mg/L at MW-5 last quarter. Between the previous and current quarters, nitrate concentrations decreased in both MW-30 and MW-31. Nitrate in MW-30 decreased from 16.2 mg/L to 14.9 mg/L and nitrate in MW-31 decreased from 20.9 mg/L to 18.7 mg/L. Although short-term fluctuations have occurred, nitrate concentrations in MW-30 and MW-31 have been relatively stable, demonstrating that plume migration is minimal or absent.

Chloride has been relatively stable at MW-30 but is generally increasing at MW-31 (see Tab J and Tab K, discussed in Section 4.2.4). The apparent increase in chloride and stable nitrate at MW-31 suggests a natural attenuation process that is affecting nitrate but not chloride. A likely process that would degrade nitrate but leave chloride unaffected is reduction of nitrate by pyrite. The likelihood of this process in the perched zone is discussed in HGC, December 7 2012; Investigation of Pyrite in the Perched Zone, White Mesa Uranium Mill Site, Blanding, Utah.

4.2.2 Current Nitrate and Chloride Isoconcentration Maps

Included under Tab I of this Report are current nitrate and chloride iso-concentration maps for the Mill site. Nitrate iso-contours start at 5 mg/L and chloride iso-contours start at 100 mg/L because those values appear to separate the plumes from background. All nitrate and chloride data used to develop these iso-concentration maps are from the current quarter's sampling events.

4.2.3 Comparison of Areal Extent

The increase in nitrate concentrations in TW4-25 from approximately 1 mg/L to 14 mg/L has expanded the plume to the northeast and brought TW4-25 back within the plume. TW4-25 was outside the plume from the first quarter of 2013 through last quarter (see Tab J and Tab K, discussed in Section 4.2.4). The increase in concentration at TW4-24 is likely the result of reduced wildlife pond dilution.

The nitrate concentration at TW4-18 (located east of the nitrate plume) increased slightly from 11.1 mg/L to 11.7 mg/L. Changes in nitrate concentrations near TW4-18 are expected to result from changes in pumping and from the cessation of water delivery to the northern wildlife ponds. The reduction in low-nitrate recharge from the ponds appeared to be having the anticipated effect of generally increased nitrate concentrations in wells downgradient of the ponds. However, decreasing to relatively stable nitrate concentrations at most wells in the vicinity of TW4-18 over the previous four quarters after previous increases suggests that conditions in this area have stabilized.

Although increases in concentration in the area downgradient of the wildlife ponds have been anticipated as the result of reduced dilution, the magnitude and timing of the increases are difficult to predict due to the measured variations in hydraulic conductivity at the site and other factors. Nitrate in the area directly downgradient (south to south-southwest) of the northern wildlife ponds is associated with the chloroform plume, is cross-gradient of the nitrate plume as defined in the CAP, and is within the capture zone of the chloroform pumping system (primarily chloroform pumping well MW-26). Perched water flow in the area is to the southwest in the same approximate direction as the main body of the nitrate plume.

Nitrate concentrations at the downgradient edge of the plume (MW-30 and MW-31) continue to be relatively stable, demonstrating that plume migration is minimal or absent. With regard to chloroform, since the initiation of nitrate pumping, the boundary of the chloroform plume has migrated to the west toward nitrate pumping well TW4-24, and more recently has migrated to the southwest to reincorporate chloroform monitoring wells TW4-6 and TW4-16. More details regarding the chloroform data and interpretation are included in the Quarterly Chloroform Monitoring Report submitted under separate cover.

4.2.4 Nitrate and Chloride Concentration Trend Data and Graphs

Attached under Tab J is a table summarizing values for nitrate and chloride for each well over time.

Attached under Tab K are graphs showing nitrate and chloride concentration plots in each monitor well over time.

4.2.5 Interpretation of Analytical Data

Comparing the nitrate analytical results to those of the previous quarter, as summarized in the tables included under Tab J, the following observations can be made for wells within and immediately surrounding the nitrate plume:

- a) Nitrate concentrations have increased by more than 20% in the following wells compared to last quarter: MW-26, TW4-19, TW4-20, TW4-22, and TW4-25;
- b) Nitrate concentrations have decreased by more than 20% in the following wells compared to last quarter: MW-27, TW4-16, TWN-2 and TWN-18;
- c) Nitrate concentrations have remained within 20% in the following wells compared to last quarter: MW-30, MW-31, TW4-21, TW4-24, TWN-1, TWN-3, TWN-4 and TWN-7; and

- d) MW-11, MW-25, and MW-32 remained non-detect

As indicated, nitrate concentrations for many of the wells with detected nitrate were within 20% of the values reported during the previous quarter, suggesting that variations are within the range typical for sampling and analytical error. The remaining wells had changes in concentration greater than 20%. The latter includes chloroform pumping wells MW-26, TW4-19, and TW4-20; nitrate pumping wells TW4-22, TW4-25 and TWN-2; and non-pumping wells MW-27, TW4-16, and TWN-18. MW-27 is located adjacent to nitrate pumping well TWN-2; and TW4-16 is located adjacent to chloroform pumping well MW-26. Fluctuations in concentrations at pumping wells and wells adjacent to pumping wells likely result in part from the effects of pumping as discussed in Section 4.1.1. Concentrations at TWN-18 are expected to be influenced by its location immediately upgradient of the nitrate plume.

As discussed in Section 4.2.3, the nitrate concentration at TW4-25 increased from approximately 1 mg/L last quarter to approximately 14 mg/L this quarter, bringing it again within the nitrate plume boundary. The nitrate concentrations in chloroform pumping wells MW-26, TW4-19, and TW4-20 increased from approximately 1.1 mg/L, 4.7 mg/L and 7.7 mg/L, respectively, to approximately 2.7 mg/L, 8.6 mg/L, and 9.8 mg/L, respectively. MW-27, located west of TWN-2, and TWN-18, located north of TWN-3, bound the nitrate plume to the west and north (See Figure I-1 under Tab I). In addition, the southernmost (downgradient) boundary of the plume remains between MW-30/MW-31 and MW-5/MW-11. Nitrate concentrations at MW-5 (adjacent to MW-11) and MW-11 have historically been low (< 1 mg/L) or non-detect for nitrate (See Table 5). MW-25, MW-26, MW-32, TW4-16, TW4-19, TW4-20, TWN-1, and TWN-4 bound the nitrate plume to the east.

As discussed above, the areal extent of the plume has expanded to the northeast to re-encompass TW4-25. Nitrate concentrations outside the nitrate plume exceed 10 mg/L at a few locations: TW4-10 (15 mg/L), TW4-12 (19.2 mg/L), TW4-18 (11.7 mg/L), TW4-26 (14.4 mg/L), TW4-27 (26.5 mg/L), and TW4-28 (19 mg/L). All these wells are located southeast of the nitrate plume as defined in the CAP and all are separated from the plume by wells having nitrate concentrations that are either non-detect, or, if detected, are less than 10 mg/L. Concentrations at TW4-10, TW4-12, TW4-18, TW4-26, TW4-27 and TW4-28 are within 20% of their concentrations during the previous quarter. From the third quarter of 2013 through the second quarter of 2014, nitrate concentrations at TW4-10 and TW4-18 exceeded 10 mg/L, dropped below 10 mg/L in the third quarter of 2014, then increased above 10 mg/L last quarter. Elevated nitrate concentrations at these wells are associated with the chloroform plume, and both are within the capture zone of the chloroform pumping system. Elevated nitrate at TW4-12, TW4-26, TW4-27, and TW4-28 is likely related to former cattle ranching operations at the site.

Chloride concentrations are measured because elevated chloride (greater than 100 mg/L) is associated with the nitrate plume. Chloride concentrations at all sampled locations this quarter are within 20% of their respective concentrations during the previous quarter except at MW-26, TW4-16, TW4-19, and TW4-25. These changes likely result from changes in pumping.

4.3 Estimation of Pumped Nitrate Mass and Residual Nitrate Mass within the Plume

Nitrate mass removed by pumping is summarized in Table 2, and includes mass removed by both chloroform and nitrate pumping wells. Table 3 shows the volume of water pumped at each well and Table 4 provides the details of the nitrate removal for each well. Mass removal calculations begin with the third quarter of 2010 because the second quarter, 2010 data were specified to be used to establish a baseline mass for the nitrate plume. As stated in the CAP, the baseline mass is to be calculated using the second quarter, 2010 concentration and saturated thickness data “within the area of the kriged 10 mg/L plume boundary.” The second quarter, 2010 data set was considered appropriate because “the second quarter, 2010 concentration peak at TWN-2 likely identifies a high concentration zone that still exists but has migrated away from the immediate vicinity of TWN-2.”

As shown in Table 2, a total of approximately 1,256 lb of nitrate has been removed from the perched zone since the third quarter of 2010. Prior to the first quarter of 2013, all direct nitrate mass removal resulted from operation of chloroform pumping wells MW-4, MW-26, TW4-4, TW4-19, and TW4-20. During the current quarter:

- A total of approximately 82.6 lb of nitrate was removed by the chloroform pumping wells and by nitrate pumping wells TW4-22, TW4-24, TW4-25, and TWN-2.
- Of the 82.6 lb removed during the current quarter, approximately 67 lb, (or 81 %), was removed by the nitrate pumping wells.

Baseline mass and current quarter mass estimates (nitrate + nitrite as N) for the nitrate plume are approximately 43,700 lb and 38,742 lbs, respectively. Mass estimates were calculated within the plume boundaries as defined by the kriged 10 mg/L isocon by 1) gridding (kriging) the nitrate concentration data on 50-foot centers; 2) calculating the volume of water in each grid cell based on the saturated thickness and assuming a porosity of 0.18; 3) calculating the mass of nitrate+nitrite as N in each cell based on the concentration and volume of water for each cell; and 4) totaling the mass of all grid cells within the 10 mg/L plume boundary. Data used in these calculations included data from wells listed in Table 3 of the CAP.

The nitrate mass estimate for the current quarter is lower than the baseline estimate by 4,958 lb, and this difference is greater than the amount of nitrate mass removed directly by pumping. Changes in the quarterly mass estimates are expected to result primarily from 1) nitrate mass removed directly by pumping, 2) natural attenuation of nitrate, and 3) changes in nitrate concentrations in wells within the plume as a result of re-distribution of nitrate within the plume and changes in saturated thicknesses. Redistribution of nitrate within the plume and changes in saturated thicknesses will be impacted by changes in pumping and in background conditions such as the decay of the perched water mound associated with the northern wildlife ponds. Cessation of water delivery to the northern wildlife ponds is expected to result in reduced saturated thicknesses and reduced dilution, which in turn is expected to result in increases in concentrations.

The mass estimate during the current quarter (38,742 lb) was larger than the mass estimate during the previous quarter (34,370 lb) by 4,372 lb or 12.7 %. This difference results primarily

from the increase in concentration at TW4-25, which increased the areal extent of the plume compared to last quarter.

Nitrate mass removal by pumping and natural attenuation (expected to result primarily from pyrite oxidation/nitrate reduction) act to lower nitrate mass within the plume. Changes resulting from redistribution of nitrate within the plume are expected to result in both increases and decreases in concentrations at wells within the plume and therefore increases and decreases in mass estimates based on those concentrations, thus generating 'noise' in the mass estimates. Furthermore, because the sum of sampling and analytical error is typically about 20%, changes in the mass estimates from quarter to quarter of up to 20% could result from typical sampling and analytical error alone. Only longer-term analyses of the mass estimates that minimize the impacts of these quarter to quarter variations will provide useful information on plume mass trends. Over the long term, nitrate mass estimates are expected to trend downward as a result of direct removal by pumping and through natural attenuation.

As specified in the CAP, once eight quarters of data are collected (starting with the first quarter of 2013), a regression trend line is to be applied to the quarterly mass estimates and evaluated. The trend line is then to be updated quarterly and reevaluated as additional quarters of data are collected. The evaluation will determine whether the mass estimates are increasing, decreasing, or stable.

As the previous quarter constituted the eighth quarter as specified in the CAP, the mass estimates were plotted, and a regression line was fitted to the data and evaluated.. The regression line was updated this quarter as shown in Figure M.1 of Tab M. The fitted line shows a decreasing trend in the mass estimates.

5.0 LONG TERM PUMP TEST AT TWN-02, TW4-22, TW4-24, and TW4-25 OPERATIONS REPORT

5.1 Introduction

Beginning in January 2013, EFRI began long term pumping of TW4-22, TW4-24, TW4-25, and TWN-02 as required by the Nitrate CAP, dated May 7, 2012 and the SCO dated December 12, 2012.

In addition, as a part of the investigation of chloroform contamination at the Mill site, EFRI has been conducting a Long Term Pump Test on MW-4, TW4-19, MW-26, and TW4-20, and, since January 31, 2010, TW4-4. As mentioned in Section 2.1.3 above, on January 14, 2015, wells TW4-01, TW4-02, and TW4-11 began pumping pursuant to the requirements in the GCAP which is awaiting final approval. The purpose of the test is to serve as an interim action that will remove a significant amount of chloroform-contaminated water while gathering additional data on hydraulic properties in the area of investigation.

Because wells MW-4, TW4-19, MW-26, TW4-4, TW4-20, TW4-01, TW4-02, and TW4-11 are pumping wells that may impact the removal of nitrate, they are included in this report and any nitrate removal realized as part of this pumping is calculated and included in the quarterly reports.

The following information documents the operational activities during the quarter.

5.2 Pumping Well Data Collection

Data collected during the quarter included the following:

- Measurement of water levels at MW-4, TW4-19, MW-26, and TW4-20 and, commencing regularly on March 1, 2010, TW4-4, on a weekly basis,
- Measurement of water levels weekly at TW4-22, TW4-24, TW4-25, and TWN-02 commencing January 28, 2013,
- Measurement of water levels weekly at TW4-01, TW4-02, and TW4-11 commencing on January 14, 2015, and on a monthly basis selected temporary wells and permanent monitoring wells.
- Measurement of pumping history, including:
 - pumping rates
 - total pumped volume
 - operational and non-operational periods.
- Periodic sampling of pumped water for chloroform and nitrate/nitrite analysis and other constituents

5.3 Water Level Measurements

Beginning August 16, 2003, water level measurements from chloroform pumping wells MW-4, MW-26, and TW4-19 were conducted weekly. From commencement of pumping TW4-20, and regularly after March 1, 2010 for TW4-4, water levels in these two chloroform pumping wells have been measured weekly. From commencement of pumping in January 2013, water levels in wells TW4-22, TW4-24, TW4-25, and TWN-02 have been measured weekly. Copies of the weekly Depth to Water monitoring sheets for MW-4, MW-26, TW4-19, TW4-20, TW4-4, TW4-22, TW4-24, TW4-25, TWN-02, TW4-01, TW4-02, and TW4-11 are included under Tab C.

Monthly depth to water monitoring is required for all of the chloroform contaminant investigation wells and non-pumping wells MW-27, MW-30, MW-31, TW4-21, TWN-1, TWN-3, TWN-4, TWN-7, and TWN-18. Copies of the monthly depth to Water monitoring sheets are included under Tab C.

5.4 Pumping Rates and Volumes

The pumping wells do not pump continuously, but are on a delay device. The wells purge for a set amount of time and then shut off to allow the well to recharge. Water from the pumping wells is either transferred to the Cell 1 evaporation pond or is used in the Mill process.

The pumped wells are fitted with a flow meter which records the volume of water pumped from the well in gallons. The flow meter readings shown in Tab C are used to calculate the gallons of water pumped from the wells each quarter as required by Section 7.2.2 of the CAP. The average pumping rates and quarterly volumes for each of the pumping wells are shown in Table 3. The cumulative volume of water pumped from each of the wells is shown in Table 4.

Specific operational problems observed with the well or pumping equipment which occurred during the quarter are noted for each well below in Sections 5.4.1 through 5.4.4.

The following issue was noted as affecting multiple wells in the pumping network and is not repeated under the Section for each well.

On December 29, 2014, an unscheduled down time occurred which lasted more than 24 hours. The down time was caused by frozen transfer lines resulting from system/discharge line upgrades. The upgrades were necessary to add three more continuous pumping wells to the chloroform pumping network. The up-sizing of the discharge line required that the old 1-inch lines be excavated while the 4-inch lines were connected. During the excavation the 1-inch lines, which were still connected to the existing pumping system, were exposed to the elements in the open trench. The Mill experienced below freezing temperatures for most of the week prior to December 29, 2014. The down time during construction caused six continuous pumping wells (MW-04, MW-26, TW4-04, TW4-20, TW4-22, and TW4-24) to be off (not pumping) until the completion of construction. Initial notice of this outage was given by telephone to DRC at approximately 1:00 pm on Monday December 29, 2014 (within 24 hours of discovery). As required by the O&M Plan, a 5-day written notification was also provided to DRC on January 5, 2015. The pumps were returned to service on January 9, 2015.

Unless specifically noted below, no additional operational problems were observed with the well or pumping equipment during the quarter.

5.4.1 TW4-19

On January 12, 2015, Mill Field Personnel noted that the pump stopped working in TW4-19. The outage was a result of the discharge line upgrade/upsizing necessary to add TW4-01, TW4-02, and TW4-11 to the chloroform pumping network. The discharge line for TW4-19 was inadvertently damaged during the upsizing activities. Details regarding the upsizing activities are provided in the notification provided to DRC on January 5, 2015. The damage to the discharge line for TW4-19 caused back pressure, which caused the pump in TW4-19 to stop. The outage due to the damage lasted approximately 48 hours. Rather than repair the line, TW4-19 was connected to the upsized discharge line used for six other wells in the vicinity.

As required by the O&M Plan, DRC was notified via telephone on Tuesday, January 13, 2015 within 24 hours of discovery. EFRI provided further documentation of the outage via e-mail on January 15, 2015 when the system had returned to full functionality.

5.4.2 TW4-02

On February 16, 2015, Mill Field Personnel noted experienced a power outage at TW4-02 during the routine weekly inspection. The Mill Electricians were notified and the power was restored to the well the same day. No official notifications to DRC were required as the issue was rectified within 24-hours.

6.0 CORRECTIVE ACTION REPORT

There are no corrective actions required during the current monitoring period.

6.1 Assessment of Previous Quarter's Corrective Actions

There were no corrective actions required during the previous quarters' monitoring period.

7.0 CONCLUSIONS AND RECOMMENDATIONS

As per the CAP, the current quarter is the sixth quarter that hydraulic capture associated with nitrate pumping wells TW4-22, TW4-24, TW4-25, and TWN-2 was evaluated. Although chloroform wells TW4-1, TW4-2, and TW4-11 began pumping this quarter and increased capture in the vicinity of MW-4, water level monitoring indicates that the apparent combined capture area of the nitrate and chloroform pumping systems is similar to last quarter. Capture associated with nitrate pumping wells continues to develop and is expected to increase over time as water levels decline due to pumping and to cessation of water delivery to the northern wildlife ponds. Furthermore, the evaluation of the long term interaction between nitrate and chloroform pumping systems will require more data to be collected as part of routine monitoring. Slow development of hydraulic capture by the nitrate pumping system is consistent with and expected based on the relatively low permeability of the perched zone at the site. Definition of capture associated with the nitrate pumping system will also be influenced by the perched groundwater mound and the apparently anomalously low water level at TWN-7.

Nitrate pumping is likely sufficient to eventually capture the entire nitrate plume upgradient of TW4-22 and TW4-24. Pumping during the current quarter was smaller than last quarter primarily due to the outage described in Section 5, but was within the range estimated for pre-pumping ('background') perched water flow through the nitrate plume. Because the pre-pumping flow calculations likely overestimate the new 'background' conditions caused by reduced recharge from the northern wildlife ponds, and because the average plume hydraulic conductivity estimate from the low end of the calculated range is likely to be more representative of actual conditions, current quarter nitrate pumping may exceed flow through the plume by a factor greater than 1.4.

First quarter, 2015 nitrate concentrations at many of the wells within and adjacent to the nitrate plume were within 20% of the values reported during the previous quarter, suggesting that variations are within the range typical for sampling and analytical error. Changes in concentration greater than 20% occurred in MW-26, MW-27, TW4-16, TW4-19, TW4-20, TW4-22, TW4-25, TWN-2, and TWN-18. The concentrations in wells MW-11, MW-25, and MW-32 remained non-detect.

Of the wells showing changes in concentration greater than 20%, MW-26, TW4-19, and TW4-20 are chloroform pumping wells; and TW4-22, TW4-25 and TWN-2 are nitrate pumping wells. MW-27 is located adjacent to chloroform pumping well TWN-2; and TW4-16 is located adjacent to chloroform pumping well MW-26. Nitrate concentration fluctuations at pumping wells and adjacent wells likely result in part from the effects of pumping. Concentrations at TWN-18 are expected to be influenced by its location immediately upgradient of the nitrate plume..

The nitrate concentration at TW4-25 increased from approximately 1 mg/L last quarter to approximately 14 mg/L this quarter, bringing it again within the nitrate plume boundary, and expanding the plume to the northeast. The nitrate concentrations in chloroform pumping wells MW-26, TW4-19, and TW4-20 increased from approximately 1.1 mg/L, 4.7 mg/L and 7.7 mg/L, respectively, to approximately 2.7 mg/L, 8.6 mg/L, and 9.8 mg/L, respectively. MW-27, located west of TWN-2, and TWN-18, located north of TWN-3, bound the nitrate plume to the west and north (See Figure I-1 under Tab I). In addition, the southernmost (downgradient) boundary of the plume remains between MW-30/MW-31 and MW-5/MW-11. Nitrate concentrations at MW-5 (adjacent to MW-11) and MW-11 have historically been low (< 1 mg/L) or non-detect for nitrate (See Table 5). MW-25, MW-26, MW-32, TW4-16, TW4-19, TW4-20, TWN-1, and TWN-4 bound the nitrate plume to the east.

Although short-term fluctuations have occurred, nitrate concentrations in MW-30 and MW-31 have been relatively stable, demonstrating that plume migration is minimal or absent. Nitrate in MW-30 decreased from 16.2 mg/L to 14.9 mg/L and nitrate in MW-31 decreased from 20.9 mg/L to 18.7 mg/L. Based on the concentration data at MW-5, MW-11, MW-30, and MW-31, the nitrate plume is under control.

Chloride has been relatively stable at MW-30 but is generally increasing at MW-31. The apparent increase in chloride and relatively stable nitrate at MW-31 suggests a natural attenuation process that is affecting nitrate but not chloride. A likely process that would degrade nitrate but leave chloride unaffected is reduction of nitrate by pyrite. The likelihood of this process in the perched zone is discussed in HGC, December 7 2012; Investigation of Pyrite in the Perched Zone, White Mesa Uranium Mill Site, Blanding, Utah.

Nitrate mass removal by pumping and natural attenuation (expected to result primarily from pyrite oxidation/nitrate reduction) act to lower nitrate mass within the plume. Changes resulting from redistribution of nitrate within the plume are expected to result in both increases and decreases in concentrations at wells within the plume and therefore increases and decreases in mass estimates based on those concentrations, thus generating 'noise' in the mass estimates. Furthermore, because the sum of sampling and analytical error is typically about 20%, changes in the mass estimates from quarter to quarter of up to 20% could result from typical sampling and analytical error alone. Longer-term analyses of the mass estimates that minimize the impact of these quarter to quarter variations are expected to provide useful information on plume mass trends. Over the long term, nitrate mass estimates are expected to trend downward as a result of direct removal by pumping and through natural attenuation.

As specified in the CAP, once eight quarters of data are collected (starting with the first quarter of 2013), a regression trend line is to be applied to the quarterly mass estimates and evaluated. The trend line is then to be updated quarterly and reevaluated as additional quarters of data are collected. As the previous quarter constituted the eighth quarter as specified in the CAP, the mass estimates were plotted, and a regression line was fitted to the data and evaluated. The regression line was updated this quarter as shown in Figure M.1 of Tab M. The fitted line shows a decreasing trend in the mass estimates.

During the current quarter, a total of approximately 82.6 lb of nitrate was removed by the chloroform pumping wells and by nitrate pumping wells TW4-22, TW4-24, TW4-25, and TWN-

2. Of the 82.6 lb removed during the current quarter, approximately 67 lb, (or 81 %), was removed by the nitrate pumping wells.

The baseline nitrate (nitrate+nitrite as N) plume mass calculated as specified in the CAP (based on second quarter, 2010 data) was approximately 43,700 lb. The mass estimate during the current quarter was calculated as 38,742 lb which was larger than the mass estimate during the previous quarter (34,370 lb) by 4,372 lb or 12.7 %. This difference results primarily from the increase in concentration at TW4-25 which increased the areal extent of the plume compared to last quarter.

Nitrate concentrations outside the nitrate plume exceed 10 mg/L at a few locations: TW4-10 (15 mg/L), TW4-12 (19.2 mg/L), TW4-18 (11.7 mg/L), TW4-26 (14.4 mg/L), TW4-27 (26.5 mg/L), and TW4-28 (19 mg/L). All these wells are located southeast of the nitrate plume as defined in the CAP and all are separated from the plume by wells having nitrate concentrations that are either non-detect, or, if detected, are less than 10 mg/L. Concentrations at TW4-10, TW4-12, TW4-18, TW4-26, TW4-27 and TW4-28 are within 20% of their concentrations during the previous quarter. From the third quarter of 2013 through the second quarter of 2014, nitrate concentrations at TW4-10 and TW4-18 exceeded 10 mg/L, dropped below 10 mg/L in the third quarter of 2014, then increased above 10 mg/L last quarter. Elevated nitrate concentrations at these wells are associated with the chloroform plume, and both are within the capture zone of the chloroform pumping system. Elevated nitrate at TW4-12, TW4-26, TW4-27, and TW4-28 is likely related to former cattle ranching operations at the site.

Increases in both nitrate and chloride concentrations at wells near the northern wildlife ponds (for example TW4-18) were anticipated as a result of reduced dilution caused by cessation of water delivery to the northern wildlife ponds. However, decreasing nitrate concentrations at most wells in the vicinity of TW4-18 from the first through third quarters of 2014 after a previously increasing trend (interrupted in the first quarter of 2014) suggest that conditions in this area have stabilized.

Nitrate mass removal from the perched zone was increased substantially by the start-up of nitrate pumping wells TW4-22, TW4-24, TW4-25, and TWN-2 during the first quarter of 2013. Continued operation of these wells is therefore recommended. Pumping these wells, regardless of any short term fluctuations in concentrations detected at the wells, helps to reduce downgradient nitrate migration by removing nitrate mass and reducing average hydraulic gradients, thereby allowing natural attenuation to be more effective. Continued operation of the nitrate pumping system is expected to eventually reduce nitrate concentrations within the plume and to further reduce or halt downgradient nitrate migration.

EFRI and its consultants have raised the issues and potential effects associated with cessation of water delivery to the northern wildlife ponds in March, 2012 during discussions with DRC in March 2012 and May 2013. While past recharge from the ponds has helped limit many constituent concentrations within the chloroform and nitrate plumes by dilution, the associated groundwater mounding has increased hydraulic gradients and contributed to plume migration. Since use of the northern wildlife ponds ceased in March 2012, the reduction in recharge and decay of the associated groundwater mound was expected to increase many constituent

concentrations within the plumes while reducing hydraulic gradients and rates of plume migration.

The net impact of reduced wildlife pond recharge is expected to be beneficial even though it was also expected to result in temporarily higher concentrations until continued mass reduction via pumping and natural attenuation ultimately reduce concentrations. Temporary increases in nitrate concentrations are judged less important than reduced nitrate migration rates. The actual impacts of reduced recharge on concentrations and migration rates will be defined by continued monitoring.

8.0 ELECTRONIC DATA FILES AND FORMAT

EFRI has provided to the Director an electronic copy of all laboratory results for groundwater quality monitoring conducted under the nitrate contaminant investigation during the quarter, in Comma Separated Values (“CSV”) format. A copy of the transmittal e-mail is included under Tab L.

9.0 SIGNATURE AND CERTIFICATION

This document was prepared by Energy Fuels Resources (USA) Inc. on May 20, 2015.

Energy Fuels Resources (USA) Inc.

By:



Scott Bakken
Director, Permitting & Environmental Affairs

Certification:

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Scott Bakken
Director, Permitting & Environmental Affairs
Energy Fuels Resources (USA) Inc.

Tables

Table 1
Summary of Well Sampling and Constituents for the Period

Well	Sample Collection Date	Date of Lab Report
Piezometer 01	2/18/2015	3/11/2015
Piezometer 02	2/18/2015	3/11/2015
Piezometer 03	2/18/2015	3/11/2015
TWN-01	2/18/2015	3/11/2015
TWN-02	2/18/2015	3/11/2015
TWN-03	2/19/2015	3/11/2015
TWN-04	2/18/2015	3/11/2015
TWN-07	2/19/2015	3/11/2015
TWN-07R	2/18/2015	3/11/2015
TWN-18	2/18/2015	3/11/2015
TW4-22	3/9/2015	3/26/2015
TW4-24	3/9/2015	3/26/2015
TW4-25	3/9/2015	3/26/2015
TWN-60	2/19/2015	3/11/2015
TW4-60	3/17/2015	3/31/2015
TWN-65	2/18/2015	3/11/2015

Note: All wells were sampled for Nitrate and Chloride.

TWN-60 is a DI Field Blank.

TWN-65 is a duplicate of TWN-01.

TW4-60 is the chloroform program DI Field Blank.

Continuously pumped well.

Table 2
Nitrate Mass Removal Per Well Per Quarter

Quarter	MW-4 (lbs.)	MW-26 (lbs.)	TW4-19 (lbs.)	TW4-20 (lbs.)	TW4-4 (lbs.)	TW4-22 (lbs.)	TW4-24 (lbs.)	TW4-25 (lbs.)	TWN-02 (lbs.)	TW4-01 (lbs.)	TW4-02 (lbs.)	TW4-11 (lbs.)	Quarter Totals (lbs.)
Q3 2010	3.2	0.3	5.8	1.7	4.7	NA	15.69						
Q4 2010	3.8	0.4	17.3	1.4	5.1	NA	27.97						
Q1 2011	2.9	0.2	64.5	1.4	4.3	NA	73.30						
Q2 2011	3.5	0.1	15.9	2.7	4.7	NA	27.01						
Q3 2011	3.5	0.5	3.5	3.9	5.4	NA	16.82						
Q4 2011	3.8	0.8	6.2	2.5	6.4	NA	19.71						
Q1 2012	3.6	0.4	0.7	5.0	6.0	NA	15.86						
Q2 2012	3.7	0.6	3.4	2.1	5.2	NA	15.03						
Q3 2012	3.8	0.5	3.6	2.0	4.7	NA	14.67						
Q4 2012	3.2	0.4	5.4	1.8	4.2	NA	14.92						
Q1 2013	2.5	0.4	14.1	1.4	3.6	8.1	43.4	7.5	14.8	NA	NA	NA	95.73
Q2 2013	2.5	0.4	5.6	1.6	3.4	10.7	37.1	6.4	23.9	NA	NA	NA	91.71
Q3 2013	3.0	0.4	48.4	1.4	3.8	6.3	72.8	6.9	33.4	NA	NA	NA	176.53
Q4 2013	3.1	0.3	15.8	1.6	3.9	9.4	75.2	6.4	46.3	NA	NA	NA	162.07
Q1 2014	2.7	0.4	4.1	1.2	3.6	11.2	60.4	2.3	17.2	NA	NA	NA	103.14
Q2 2014	2.4	0.3	3.3	0.9	3.0	9.5	63.4	1.3	17.8	NA	NA	NA	101.87
Q3 2014	2.3	0.1	4.1	0.6	3.1	8.5	56.2	1.6	16.4	NA	NA	NA	92.99
Q4 2014	2.7	0.2	7.8	1.0	3.8	11.0	53.2	0.9	28.0	NA	NA	NA	108.57
Q1 2015	3.7	0.54	4.33	1.29	2.37	12.73	26.69	8.59	19.17	1.45	1.07	0.72	82.61
Well Totals (pounds)	59.93	7.42	233.90	35.70	81.28	87.45	488.31	41.98	216.98	1.45	1.07	0.72	1256.18

Table 3 Well Pumping Rates and Volumes

Pumping Well Name	Volume of Water Pumped During the Quarter (gals)	Average Pump Rate (gpm)
MW-4	76,454.3	4.60
MW-26	24,004.9	11.63
TW4-4	36,941.3	10.87
TW4-19	60,553.0	10.65
TW4-20	15,744.7	8.78
TW4-22	22,046.9	17.77
TW4-24	92,449.3	17.56
TW4-25	71,452.4	16.01
TWN-2	47,262.2	18.28
TW4-01	24,569.2	17.81
TW4-02	24,156.7	17.56
TW4-11	9,898.7	17.92

Table 4
Table 4 Quarterly Calculation of Nitrate Removed and Total Volume of Water Pumped

Quarter	MW-4							MW-26						
	Total Pumped (gal)	Conc (mg/L)	Conc (ug/L)	Total Pumped (liters)	Total (ug)	Total (grams)	Total (pounds)	Total Pumped (gal)	Conc (mg/L)	Conc (ug/L)	Total Pumped (liters)	Total (ug)	Total (grams)	Total (pounds)
Calculations and Data Origination	Total Gallons pumped for the quarter from the Flow Meter data	Concentration from the analytical data	Concentration in mg/LX1000 to convert to ug/L	Total pumped gallons/3.785 to convert to liters	Concentration in ug/L X total liters	Total ug/1000000 to convert to grams	Total grams/453.592 to convert to pounds							
Q3 2010	79859.1	4.8	4800	302266.7	1450880129	1450.9	3.20	63850.0	0.6	600	241672.3	145003350	145	0.32
Q4 2010	90042.2	5	5000	340809.7	1704048635	1704.0	3.76	60180.0	0.7	700	227781.3	159446910	159	0.35
Q1 2011	76247.6	4.6	4600	288597.2	1327546964	1327.5	2.93	55130.0	0.5	500	208667.1	104333525	104	0.23
Q2 2011	85849.3	4.9	4900	324939.6	1592204042	1592.2	3.51	55800.6	0.3	300	211205.3	63361581	63	0.14
Q3 2011	85327.7	4.9	4900	322965.3	1582530188	1582.5	3.49	65618.0	0.9	900	248364.1	223527717	224	0.49
Q4 2011	89735.0	5.1	5100	339647.0	1732199573	1732.2	3.82	50191.3	2	2000	189974.1	379948141	380	0.84
Q1 2012	90376.4	4.8	4800	342074.7	1641958435	1642.0	3.62	31440.1	1.7	1700	119000.8	202301323	202	0.45
Q2 2012	90916.5	4.9	4900	344118.8	1686181940	1686.2	3.72	26701.2	2.5	2500	101064.1	252660294	253	0.56
Q3 2012	91607.0	5	5000	346732.5	1733662475	1733.7	3.82	25246.0	2.6	2600	95556.1	248445886	248	0.55
Q4 2012	78840.0	4.8	4800	298409.4	1432365120	1432.4	3.16	30797.0	1.46	1460	116566.6	170187302	170	0.38
Q1 2013	62943.7	4.78	4780	238241.9	1138796304	1138.8	2.51	22650.7	2.27	2270	85732.9	194613682	195	0.43
Q2 2013	71187.3	4.22	4220	269443.9	1137053387	1137.1	2.51	25343.4	2.11	2110	95924.8	202401263	202	0.45
Q3 2013	72898.8	4.89	4890	275922.0	1349258375	1349.3	2.97	25763.0	1.98	1980	97513.0	193075651	193	0.43
Q4 2013	70340.4	5.25	5250	266238.4	1397751674	1397.8	3.08	24207.6	1.38	1380	91625.8	126443557	126	0.28
Q1 2014	69833.8	4.7	4700	264320.9	1242308385	1242.3	2.74	23263.1	2.12	2120	88050.8	186667767	187	0.41
Q2 2014	71934.9	4.08	4080	272273.6	1110876274	1110.9	2.45	23757.5	1.42	1420	89922.1	127689435	128	0.28
Q3 2014	74788.2	3.7	3700	283073.3	1047371347	1047.4	2.31	24062.4	0.7	700	91076.2	63753329	64	0.14
Q4 2014	63093.0	5.07	5070	238807.0	1210751515	1210.8	2.67	21875.8	0.934	934	82799.9	77335109	77	0.17
Q1 2015	76454.3	5.75	5750	289379.5	1663932272	1663.9	3.67	24004.9	2.68	2680	90858.5	243500905	244	0.54

Totals Since Q3

2010

1492275.15

59.93

679882.6

7.42

Highlighted cells are the total for the current quarter

Table 4
Table 4 Quarterly Calculation of Nitrate Removed and Total Volume of Water Pumped

Quarter	TW4-19							TW4-20						
	Total Pumped (gal)	Conc (mg/L)	Conc (ug/L)	Total Pumped (liters)	Total (ug)	Total (grams)	Total (pounds)	Total Pumped (gal)	Conc (mg/L)	Conc (ug/L)	Total Pumped (liters)	Total (ug)	Total (grams)	Total (pounds)
Calculations and Data Origination														
Q3 2010	116899.2	5.9	5900	442463.5	2.611E+09	2611	5.76	39098.3	5.3	5300	147987.1	784331447	784	1.73
Q4 2010	767970.5	2.7	2700	2906768.3	7.848E+09	7848	17.30	36752.5	4.6	4600	139108.2	639897778	640	1.41
Q1 2011	454607.9	17	17000	1720690.9	2.925E+10	29252	64.49	37187.5	4.4	4400	140754.7	619320625	619	1.37
Q2 2011	159238.9	12	12000	602719.2	7.233E+09	7233	15.95	67907.7	4.8	4800	257030.6	1.234E+09	1234	2.72
Q3 2011	141542.6	3	3000	535738.7	1.607E+09	1607	3.54	72311.2	6.5	6500	273697.9	1.779E+09	1779	3.92
Q4 2011	147647.2	5	5000	558844.7	2.794E+09	2794	6.16	72089.3	4.2	4200	272858.0	1.146E+09	1146	2.53
Q1 2012	148747.0	0.6	600	563007.4	337804437	338	0.74	76306.0	7.9	7900	288818.2	2.282E+09	2282	5.03
Q2 2012	172082.0	2.4	2400	651330.5	1.563E+09	1563	3.45	22956.4	11	11000	86890.1	955790963	956	2.11
Q3 2012	171345.0	2.5	2500	648540.8	1.621E+09	1621	3.57	22025.0	10.8	10800	83364.6	900337950	900	1.98
Q4 2012	156653.0	4.1	4100	592931.6	2.431E+09	2431	5.36	20114.0	11	11000	76131.5	837446390	837	1.85
Q1 2013	210908.0	7.99	7990	798286.8	6.378E+09	6378	14.06	18177.0	9.07	9070	68799.9	624015501	624	1.38
Q2 2013	226224.0	2.95	2950	856257.8	2.526E+09	2526	5.57	20252.4	9.76	9760	76655.3	748156060	748	1.65
Q3 2013	329460.1	17.6	17600	1247006.5	2.195E+10	21947	48.39	19731.0	8.65	8650	74681.8	645997873	646	1.42
Q4 2013	403974.0	4.7	4700	1529041.6	7.186E+09	7186	15.84	19280.2	9.64	9640	72975.6	703484369	703	1.55
Q1 2014	304851.0	1.62	1620	1153861.0	1.869E+09	1869	4.12	18781.6	7.56	7560	71088.4	537427971	537	1.18
Q2 2014	297660.0	1.34	1340	1126643.1	1.51E+09	1510	3.33	18462.4	5.95	5950	69880.2	415787095	416	0.92
Q3 2014	309742.0	1.6	1600	1172373.5	1.876E+09	1876	4.14	17237.9	4.3	4300	65245.5	280555441	281	0.62
Q4 2014	198331.0	4.72	4720	750682.8	3.543E+09	3543	7.81	16341.8	7.67	7670	61853.7	474417979	474	1.05
Q1 2015	60553.0	8.56	8560	229193.1	1.962E+09	1962	4.33	15744.7	9.8	9800	59593.7	584018157	584	1.29

Totals Since Q3

2010

4778436.4

233.90

630756.9

35.70

Highlighted cells are the total for the current quarter

Table 4
Quarterly Calculation of Nitrate Removed and Total Volume of Water Pumped

Quarter	TW4-4							TW4-22							
	Total Pumped (gal)	Conc (mg/L)	Conc (ug/L)	Total Pumped (liters)	Total (ug)	Total (grams)	Total (pounds)	Total Pumped (gal)	Conc (mg/L)	Conc (ug/L)	Total Pumped (liters)	Total (ug)	Total (grams)	Total (pounds)	
Calculations and Data Origination															
Q3 2010	76916.8	7.30	7300.00	291130.1	2.1E+09	2125.25	4.69	NA	NA	NA	NA	NA	NA	NA	NA
Q4 2010	86872.1	7.10	7100.00	328810.9	2.3E+09	2334.56	5.15	NA	NA	NA	NA	NA	NA	NA	NA
Q1 2011	73360.0	7.00	7000.00	277667.6	1.9E+09	1943.67	4.29	NA	NA	NA	NA	NA	NA	NA	NA
Q2 2011	80334.6	7.00	7000.00	304066.5	2.1E+09	2128.47	4.69	NA	NA	NA	NA	NA	NA	NA	NA
Q3 2011	97535.0	6.60	6600.00	369170.0	2.4E+09	2436.52	5.37	NA	NA	NA	NA	NA	NA	NA	NA
Q4 2011	109043.5	7.00	7000.00	412729.6	2.9E+09	2889.11	6.37	NA	NA	NA	NA	NA	NA	NA	NA
Q1 2012	101616.8	7.10	7100.00	384619.6	2.7E+09	2730.80	6.02	NA	NA	NA	NA	NA	NA	NA	NA
Q2 2012	87759.1	7.10	7100.00	332168.2	2.4E+09	2358.39	5.20	NA	NA	NA	NA	NA	NA	NA	NA
Q3 2012	80006.0	7.10	7100.00	302822.7	2.2E+09	2150.04	4.74	NA	NA	NA	NA	NA	NA	NA	NA
Q4 2012	71596.0	7.00	7000.00	270990.9	1.9E+09	1896.94	4.18	NA	NA	NA	NA	NA	NA	NA	NA
Q1 2013	58716.8	7.36	7360.00	222243.1	1.6E+09	1635.71	3.61	16677.4	58.0	58000.0	63124.0	3661189622.0	3661.2	8.07	
Q2 2013	65603.4	6.30	6300.00	248308.9	1.6E+09	1564.35	3.45	25523.2	50.2	50200.0	96605.3	4849586662.4	4849.6	10.69	
Q3 2013	63515.4	7.22	7220.00	240405.8	1.7E+09	1735.73	3.83	25592.9	29.7	29700.0	96869.1	2877013057.1	2877.0	6.34	
Q4 2013	60233.6	7.84	7840.00	227984.2	1.8E+09	1787.40	3.94	24952.2	45.2	45200.0	94444.1	4268872280.4	4268.9	9.41	
Q1 2014	58992.9	7.28	7280.00	223288.1	1.6E+09	1625.54	3.58	24532.0	54.6	54600.0	92853.6	5069807652.0	5069.8	11.18	
Q2 2014	60235.3	5.91	5910.00	227990.6	1.3E+09	1347.42	2.97	24193.9	47.2	47200.0	91573.9	4322288622.8	4322.3	9.53	
Q3 2014	69229.4	5.30	5300.00	262033.3	1.4E+09	1388.78	3.06	24610.9	41.5	41500.0	93152.3	3865818644.8	3865.8	8.52	
Q4 2014	64422.6	7.02	7020.00	243839.5	1.7E+09	1711.75	3.77	23956.9	54.9	54900.0	90676.9	4978159970.9	4978.2	10.97	
Q1 2015	36941.3	7.70	7700.00	139822.8	1.1E+09	1076.64	2.37	22046.9	69.2	69200.0	83447.5	5774568141.8	5774.6	12.73	

Totals Since Q3

2010 1402930.6

81.28 212086.3

87.45

Highlighted cells are the total for the current quarter

Table 4
Quarterly Calculation of Nitrate Removed and Total Volume of Water Pumped

Quarter	TW4-24							TW4-25						
	Total Pumped (gal)	Conc (mg/L)	Conc (ug/L)	Total Pumped (liters)	Total (ug)	Total (grams)	Total (pounds)	Total Pumped (gal)	Conc (mg/L)	Conc (ug/L)	Total Pumped (liters)	Total (ug)	Total (grams)	Total (pounds)
Calculations and Data Origination														
Q3 2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q4 2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q1 2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q2 2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q3 2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q4 2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q1 2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q2 2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q3 2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q4 2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q1 2013	144842.6	35.9	35900.0	548229.2	19681429751.9	19681.4	43.39	99369.9	9.0	9000.0	376115.1	3385035643.5	3385.0	7.46
Q2 2013	187509.3	23.7	23700.0	709722.7	16820428001.9	16820.4	37.08	147310.4	5.2	5240.0	557569.9	2921666087.4	2921.7	6.44
Q3 2013	267703.5	32.6	32600.0	1013257.7	33032202568.5	33032.2	72.82	145840.9	5.69	5690.0	552007.8	3140924419.0	3140.9	6.92
Q4 2013	260555.3	34.6	34600.0	986201.8	34122582643.3	34122.6	75.23	126576.5	6.10	6100.0	479092.1	2922461520.3	2922.5	6.44
Q1 2014	229063.9	31.6	31600.0	867006.9	27397416823.4	27397.4	60.40	129979.2	2.16	2160.0	491971.3	1062657947.5	1062.7	2.34
Q2 2014	216984.1	35.0	35000.0	821284.8	28744968647.5	28745.0	63.37	124829.8	1.21	1210.0	472480.8	571701759.5	571.7	1.26
Q3 2014	213652.5	31.5	31500.0	808674.7	25473253443.8	25473.3	56.16	119663.9	1.60	1600.0	452927.9	724684578.4	724.7	1.60
Q4 2014	178468.7	35.7	35700.0	675504.0	24115493853.2	24115.5	53.17	107416.1	1.03	1030.0	406569.9	418767036.7	418.8	0.92
Q1 2015	92449.3	34.6	34600.0	349920.6	12107252777.3	12107.3	26.69	71452.4	14.40	14400.0	270447.3	3894441609.6	3894.4	8.59

Totals Since Q3

2010 1791229.2

488.31 1072439.1

41.98

Highlighted cells are the total for the current quarter

Table 4
Quarterly Calculation of Nitrate Removed and Total Volume of Water Pumped

Quarter	TWN-02							TW4-01						
	Total Pumped (gal)	Conc (mg/L)	Conc (ug/L)	Total Pumped (liters)	Total (ug)	Total (grams)	Total (pounds)	Total Pumped (gal)	Conc (mg/L)	Conc (ug/L)	Total Pumped (liters)	Total (ug)	Total (grams)	Total (pounds)
Calculations and Data Origination														
Q3 2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q4 2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q1 2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q2 2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q3 2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q4 2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q1 2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q2 2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q3 2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q4 2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Q1 2013	31009.4	57.3	57300.0	117370.6	6725334176.7	6725.3	14.83	NA	NA	NA	NA	NA	NA	NA
Q2 2013	49579.3	57.7	57700.0	187657.7	10827846433.9	10827.8	23.87	NA	NA	NA	NA	NA	NA	NA
Q3 2013	50036.5	80.0	80000.0	189388.2	15151052200.0	15151.1	33.40	NA	NA	NA	NA	NA	NA	NA
Q4 2013	49979.9	111.0	111000.0	189173.9	20998305286.5	20998.3	46.29	NA	NA	NA	NA	NA	NA	NA
Q1 2014	48320.4	42.6	42600.0	182892.7	7791229616.4	7791.2	17.18	NA	NA	NA	NA	NA	NA	NA
Q2 2014	47611.9	44.7	44700.0	180211.0	8055433555.1	8055.4	17.76	NA	NA	NA	NA	NA	NA	NA
Q3 2014	46927.2	42.0	42000.0	177619.5	7460016984.0	7460.0	16.45	NA	NA	NA	NA	NA	NA	NA
Q4 2014	47585.6	70.6	70600.0	180111.5	12715871617.6	12715.9	28.03	NA	NA	NA	NA	NA	NA	NA
Q1 2015	47262.2	48.6	48600.0	178887.4	8693928952.2	8693.9	19.17	24569.2	7.1	7060.0	92994.4	656540619.3	656.5	1.45

Totals Since Q3
2010

418312.4

216.98

24569.2

1.45

Highlighted cells are the total for the current quarter

Highlighted cells are the total for the current quarter

Table 4
Quarterly Calculation of Nitrate Removed and Total Volume of Water Pumped

Quarter	TW4-02							TW4-11							Total Removed by All Wells (pounds)
	Total Pumped (gal)	Conc (mg/L)	Conc (ug/L)	Total Pumped (liters)	Total (ug)	Total (grams)	Total (pounds)	Total Pumped (gal)	Conc (mg/L)	Conc (ug/L)	Total Pumped (liters)	Total (ug)	Total (grams)	Total (pounds)	
Calculations and Data Origination															
Q3 2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	15.69
Q4 2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	27.97
Q1 2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	73.30
Q2 2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	27.01
Q3 2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16.82
Q4 2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	19.71
Q1 2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	15.86
Q2 2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	15.03
Q3 2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	14.67
Q4 2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	14.92
Q1 2013	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	95.73
Q2 2013	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	91.71
Q3 2013	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	176.53
Q4 2013	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	162.07
Q1 2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	103.14
Q2 2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	101.87
Q3 2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	92.99
Q4 2014	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	108.57
Q1 2015	24156.7	5.3	5320.0	91433.1	486424142.5	486.4	1.07	9898.7	8.7	8720.0	37466.6	326708573.2	326.7	0.72	82.61

Totals Since Q3

2010 24156.7

1.07 9898.7

0.72 1256.18

Highlighted cells are the total for the current quarter

Highlighted cells are the total for the current quarter

Table 5
Nitrate Data Over Time for MW-30, MW-31, MW-5, and MW-11

Location	Q2 2010	Q3 2010	Q4 2010	Q1 2011	Q2 2011	Q3 2011	Q4 2011	Q1 2012	Q2 2012	Q3 2012	Q4 2012	Q1 2013	Q2 2013	Q3 2013	Q4 2013	Q1 2014	Q2 2014	Q3 2014	Q4 2014	Q1 2015
MW-30	15.8	15	16	16	17	16	16	17	16	17	18.5	21.4	18.8	17.6	19.5	18.4	19.4	16.8	16.2	14.9
MW-31	22.5	21	20	21	22	21	21	21	20	21	23.6	19.3	23.8	21.7	23.9	20.6	23.1	18.9	20.9	18.7
MW-5	ND	NS	0.2	NS	0.2	NS	0.2	NS	0.1	NS	ND	NS	ND	NS	0.279	NS	ND	NS	0.21	NS
MW-11	ND																			

ND = Not detected

NS = Not Sampled

TABLE 6
Slug Test Results
(Using KGS Solution and Automatically Logged Data)

Well	K (cm/s)	K (ft/day)
MW-30	1.0E-04	0.28
MW-31	7.1E-05	0.20
TW4-22	1.3E-04	0.36
TW4-24	1.6E-04	0.45
TW4-25	5.8E-05	0.16
TWN-2	1.5E-05	0.042
TWN-3	8.6E-06	0.024
Average 1		0.22
Average 2		0.15
Average 3		0.32
Average 4		0.31

Notes:

Average 1 = arithmetic average of all wells

Average 2 = geometric average of all wells

Average 3 = arithmetic average of MW-30, MW-31, TW4-22, and TW4-24

Average 4 = geometric average of MW-30, MW-31, TW4-22, and TW4-24

cm/s = centimeters per second

ft/day = feet per day

K = hydraulic conductivity

KGS = KGS Unconfined Slug Test Solution in Aqtesolve™.

TABLE 7
Pre-Pumping Saturated Thicknesses

Well	Depth to Brushy Basin (ft)	Depth to Water Fourth Quarter, 2012 (ft)	Saturated Thickness Above Brushy Basin (ft)
TW4-22	112	53	58
TW4-24	110	55	55

Notes:

ft = feet

TABLE 8
Pre-Pumping Hydraulic Gradients and Flow Calculations

Pathline Boundaries	Path Length (ft)	Head Change (ft)	Hydraulic Gradient (ft/ft)
TW4-25 to MW-31	2060	48	0.023
TWN-2 to MW-30	2450	67	0.027
		average	0.025
		¹ min flow (gpm)	1.31
		² max flow (gpm)	2.79

Notes:

ft = feet

ft/ft = feet per foot

gpm = gallons per minute

¹ assumes width = 1,200 ft; saturated thickness = 56 ft; K = 0.15 ft/day; and gradient = 0.025 ft/ft

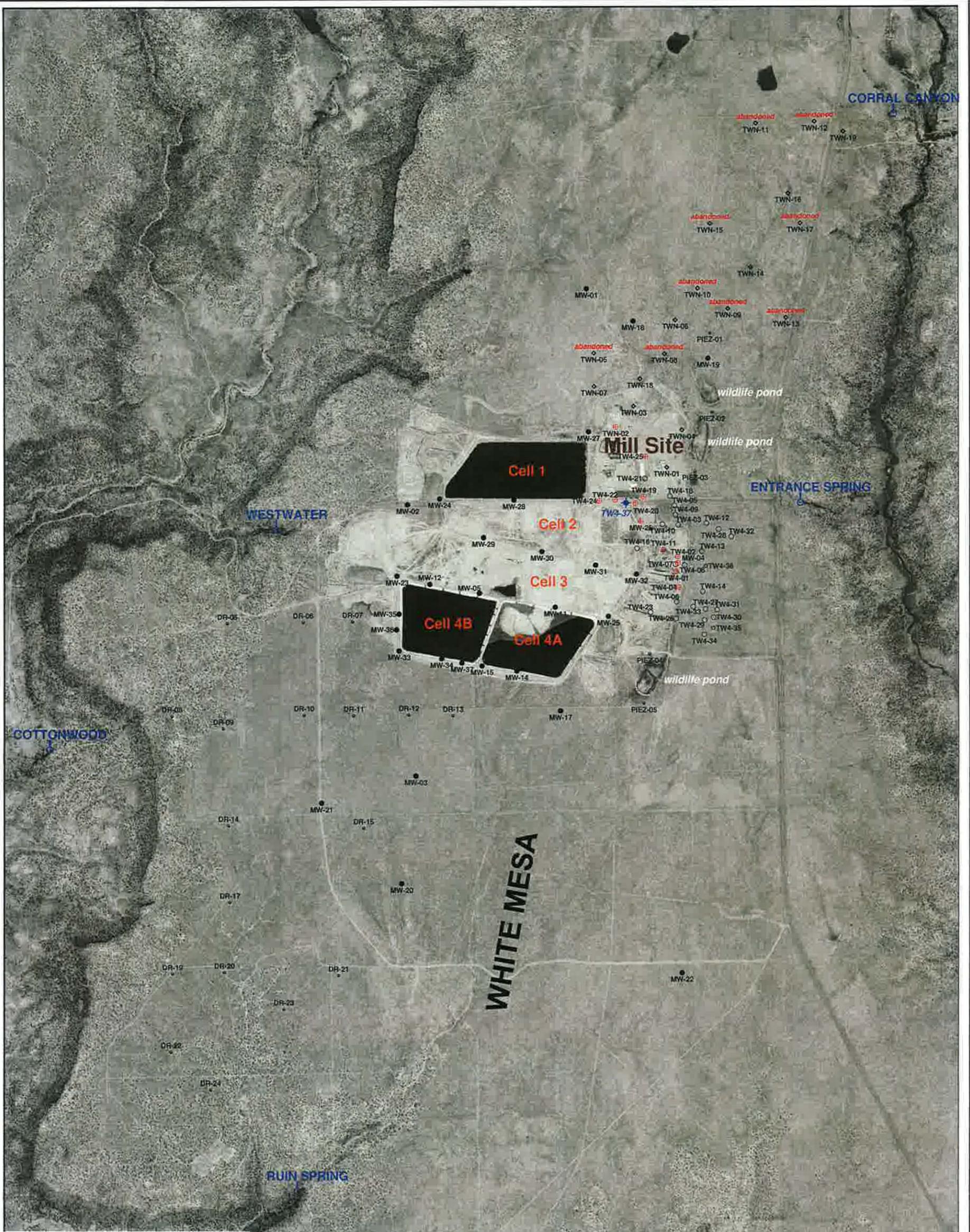
² assumes width = 1,200 ft; saturated thickness = 56 ft; K = 0.32 ft/day; and gradient = 0.025 ft/ft

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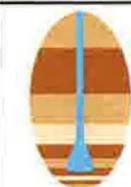
Tab A

Site Plan and Perched Well Locations White Mesa Site



EXPLANATION

-  TW4-37 temporary perched monitoring well installed March, 2015
-  TW4-19 perched chloroform or nitrate pumping well
-  MW-5 perched monitoring well
-  TW4-12 temporary perched monitoring well
-  TWN-7 temporary perched nitrate monitoring well
-  PIEZ-1 perched piezometer
-  TW4-35 temporary perched monitoring well installed May, 2014
-  RUIN SPRING seep or spring



**HYDRO
GEO
CHEM, INC.**

WHITE MESA SITE PLAN SHOWING LOCATIONS OF PERCHED WELLS AND PIEZOMETERS

APPROVED	DATE	REFERENCE	FIGURE
		H:/718000/may15/Uwelloc0315_rev.srf	A-1

Tab B

Order of Sampling and Field Data Worksheets

Nitrate Order 1st Quarter 2015

Nitrate Samples					
Name	Nitrate Mg/L Previous Qrt.	Date/Purge	sample	Depth	Total Depth

TWN-7	0.968	2/19/15	0735		105
TWN-4	1.44	2/18/15	1256		125.7
TWN-1	1.46	2/18/15	1325		112.5
TWN-18	1.47	2/18/15	1401		145
TWN-3	19.1	2/19/15	0745		96
TWN-2	70.6	2/18/15	0825		96
Duplicate of	<u>TWN-01</u>	2/18/15	1325		
Rinsate		2/18/15	1157		
DI Sample	<u>TWN-60</u>	2/19/15	0710		
Piez 1	5.75	2/18/15	0857		
Piez 2	0.755	2/18/15	0835		
Piez 3	1.74	2/18/15	0845		

Rinsate Samples		
Name	Date	Sample

TWN-7R	2/18/15	1157
TWN-4R		
TWN-1R		
TWN-18R		
TWN-3R		
TWN-2R		

Samplers: _____

Volume of Water Purged gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.
 S/60 =

Time to evacuate two casing volumes (2V)
 T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input type="checkbox"/>	HCL	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologics	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

If preservative is used, specify Type and Quantity of Preservative:

Final Depth

Sample Time

See instruction

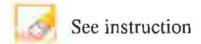
Comment

Arrived on site at 0852 Tanner and Garrin present to collect samples.
 Samples bailed at 0857 water was mostly clear but had some wood like particles floating
 Left site at 0900

Do not touch this cell (SheetName)



**ATTACHMENT 1-2
 WHITE MESA URANIUM MILL
 FIELD DATA WORKSHEET FOR GROUNDWATER**



Description of Sampling Event:

Location (well name): Sampler Name and initials:

Field Sample ID

Date and Time for Purging and Sampling (if different)

Well Purging Equip Used: pump or bailer Well Pump (if other than Bennet)

Purging Method Used: 2 casings 3 casings

Sampling Event Prev. Well Sampled in Sampling Event

pH Buffer 7.0 pH Buffer 4.0

Specific Conductance μ MHOS/ cm Well Depth(0.01ft):

Depth to Water Before Purging Casing Volume (V) 4" Well: (.653h)
 3" Well: (.367h)

Weather Cond. Ext'l Amb. Temp. °C (prior sampling event)

Time	<input type="text" value="0833"/>	Gal. Purged	<input type="text" value="0"/>
Conductance	<input type="text" value="790"/>	pH	<input type="text" value="6.87"/>
Temp. °C	<input type="text" value="13.34"/>		
Redox Potential Eh (mV)	<input type="text" value="299"/>		
Turbidity (NTU)	<input type="text" value="0"/>		

Time	<input type="text"/>	Gal. Purged	<input type="text"/>
Conductance	<input type="text"/>	pH	<input type="text"/>
Temp. °C	<input type="text"/>		
Redox Potential Eh (mV)	<input type="text"/>		
Turbidity (NTU)	<input type="text"/>		

Time	<input type="text"/>	Gal. Purged	<input type="text"/>
Conductance	<input type="text"/>	pH	<input type="text"/>
Temp. °C	<input type="text"/>		
Redox Potential Eh (mV)	<input type="text"/>		
Turbidity (NTU)	<input type="text"/>		

Time	<input type="text"/>	Gal. Purged	<input type="text"/>
Conductance	<input type="text"/>	pH	<input type="text"/>
Temp. °C	<input type="text"/>		
Redox Potential Eh (mV)	<input type="text"/>		
Turbidity (NTU)	<input type="text"/>		

Volume of Water Purged gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.
 S/60 =

Time to evacuate two casing volumes (2V)
 T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input type="checkbox"/>	HCL	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologies	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

If preservative is used, specify Type and Quantity of Preservative:

Final Depth

Sample Time

 See instruction

Comment

Arrived on site at 0830 Tanner and Garrin present to collect samples.
 Samples bailed at 0835 water was mostly clear
 Left site at 0838

Piez-02 02-18-2015 Do not touch this cell (SheetName)

Volume of Water Purged gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.
 S/60 =

Time to evacuate two casing volumes (2V)
 T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input type="checkbox"/>	HCL	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologics	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

If preservative is used, specify Type and Quantity of Preservative:

chloride

Final Depth

Sample Time

See instruction

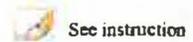
Comment

*Arrived on site at 0840 Tanner and Garrin present to collect samples
 Samples bailed at 0845 water was mostly clear
 Left site at 0848*

Do not touch this cell (SheetName)



ATTACHMENT 1-2
WHITE MESA URANIUM MILL
FIELD DATA WORKSHEET FOR GROUNDWATER



Description of Sampling Event: 1st Quarter Nitrate 2015

Location (well name): TWN-01

Sampler Name and initials: Tanner Holliday / TH

Field Sample ID TWN-01_02182015

Date and Time for Purging 2/18/2015

and Sampling (if different) N/A

Well Purging Equip Used: pump or bailer

Well Pump (if other than Bennet) Grundfos

Purging Method Used: 2 casings 3 casings

Sampling Event Quarterly Nitrate

Prev. Well Sampled in Sampling Event TWN-07, TWN-04

pH Buffer 7.0 7.0

pH Buffer 4.0 4.0

TWN-04

Specific Conductance 1000 μ MHOS/cm

Well Depth(0.01ft): 112.50

Depth to Water Before Purging 60.88

Casing Volume (V) 4" Well: 33.70 (.653h)
3" Well: 0 (.367h)

Weather Cond. Sunny

Ext'l Amb. Temp. °C (prior sampling event) 9°

Time	<u>1322</u>	Gal. Purged	<u>55</u>
Conductance	<u>841</u>	pH	<u>6.75</u>
Temp. °C	<u>15.07</u>		
Redox Potential Eh (mV)	<u>197</u>		
Turbidity (NTU)	<u>0</u>		

Time	<u>1323</u>	Gal. Purged	<u>66</u>
Conductance	<u>841</u>	pH	<u>6.76</u>
Temp. °C	<u>15.07</u>		
Redox Potential Eh (mV)	<u>196</u>		
Turbidity (NTU)	<u>0</u>		

Time	<u>1324</u>	Gal. Purged	<u>77</u>
Conductance	<u>851</u>	pH	<u>6.76</u>
Temp. °C	<u>15.06</u>		
Redox Potential Eh (mV)	<u>194</u>		
Turbidity (NTU)	<u>0</u>		

Time	<u>1325</u>	Gal. Purged	<u>88</u>
Conductance	<u>853</u>	pH	<u>6.78</u>
Temp. °C	<u>15.07</u>		
Redox Potential Eh (mV)	<u>193</u>		
Turbidity (NTU)	<u>0</u>		

41-1902 11-07 08:04:00 1.0 2015 2/18/2015 13:22:00 01000 6.75 15.07 197 0 0.00000000

Volume of Water Purged gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.
S/60 =

Time to evacuate two casing volumes (2V)
T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input type="checkbox"/>	HCL	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologics	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

If preservative is used, specify Type and Quantity of Preservative:

Final Depth

Sample Time

See instruction

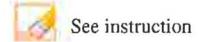
Comment

Arrived on site at 1315 Tanner and Garrin present for purge and sampling event.
Purge began at 1317 Purged well for a total of 8 minutes. Water was clear
Purge ended and samples collected at 1325. Left site at 1327

Do not touch this cell (SheetName)



**ATTACHMENT 1-2
 WHITE MESA URANIUM MILL
 FIELD DATA WORKSHEET FOR GROUNDWATER**



Description of Sampling Event:

Location (well name): Sampler Name and initials:

Field Sample ID

Date and Time for Purging and Sampling (if different)

Well Purging Equip Used: pump or bailer Well Pump (if other than Bennet)

Purging Method Used: 2 casings 3 casings

Sampling Event Prev. Well Sampled in Sampling Event

pH Buffer 7.0 pH Buffer 4.0

Specific Conductance μ MHOS/ cm Well Depth(0.01ft):

Depth to Water Before Purging Casing Volume (V) 4" Well: (.653h)
 3" Well: (.367h)

Weather Cond. Ext'l Amb. Temp. °C (prior sampling event)

Time	<input type="text" value="0824"/>	Gal. Purged	<input type="text" value="0"/>
Conductance	<input type="text" value="2948"/>	pH	<input type="text" value="6.56"/>
Temp. °C	<input type="text" value="14.71"/>		
Redox Potential Eh (mV)	<input type="text" value="311"/>		
Turbidity (NTU)	<input type="text" value="0"/>		

Time	<input type="text"/>	Gal. Purged	<input type="text"/>
Conductance	<input type="text"/>	pH	<input type="text"/>
Temp. °C	<input type="text"/>		
Redox Potential Eh (mV)	<input type="text"/>		
Turbidity (NTU)	<input type="text"/>		

Time	<input type="text"/>	Gal. Purged	<input type="text"/>
Conductance	<input type="text"/>	pH	<input type="text"/>
Temp. °C	<input type="text"/>		
Redox Potential Eh (mV)	<input type="text"/>		
Turbidity (NTU)	<input type="text"/>		

Time	<input type="text"/>	Gal. Purged	<input type="text"/>
Conductance	<input type="text"/>	pH	<input type="text"/>
Temp. °C	<input type="text"/>		
Redox Potential Eh (mV)	<input type="text"/>		
Turbidity (NTU)	<input type="text"/>		

Volume of Water Purged gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.

S/60 =

Time to evacuate two casing volumes (2V)

T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input type="checkbox"/>	HCL	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologics	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

If preservative is used, specify Type and Quantity of Preservative:

Chloride

Final Depth

Sample Time

 See instruction

Comment

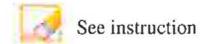
Arrived on site at 0822 Tanner and Garrin present to collect samples.
 Samples collected at 0825 water was clear
 Left site at 0827

Continuous Pumping Well

TWN-02 02-18-2015 Do not touch this cell (SheetName)



**ATTACHMENT 1-2
 WHITE MESA URANIUM MILL
 FIELD DATA WORKSHEET FOR GROUNDWATER**



Description of Sampling Event: 1st Quarter Nitrate 2015

Location (well name): TWN-03

Sampler Name and initials: Tanner Holliday / TH

Field Sample ID TWN-03_02192015

Date and Time for Purging 2/18/2015

and Sampling (if different) 2/19/2015

Well Purging Equip Used: pump or bailer

Well Pump (if other than Bennet) Grundfos

Purging Method Used: 2 casings 3 casings

Sampling Event Quarterly Nitrate

Prev. Well Sampled in Sampling Event TWN-18

pH Buffer 7.0 7.0

pH Buffer 4.0 4.0

Specific Conductance 1000 μ MHOS/ cm

Well Depth(0.01ft): 96.00

Depth to Water Before Purging 38.90

Casing Volume (V) 4" Well: 37.28 (.653h)
 3" Well: 0 (.367h)

Weather Cond. Sunny

Ext'l Amb. Temp. °C (prior sampling event) 10°

Time	<u>1429</u>	Gal. Purged	<u>47.60</u>
Conductance	<u>7350</u>	pH	<u>6.54</u>
Temp. °C	<u>15.15</u>		
Redox Potential Eh (mV)	<u>215</u>		
Turbidity (NTU)	<u>2.0</u>		

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time	<u>0744</u>	Gal. Purged	<u>0</u>
Conductance	<u>2294</u>	pH	<u>6.60</u>
Temp. °C	<u>13.99</u>		
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time	<u>0746</u>	Gal. Purged	<u>0</u>
Conductance	<u>2299</u>	pH	<u>6.59</u>
Temp. °C	<u>13.97</u>		
Redox Potential Eh (mV)			
Turbidity (NTU)			

Before

After

Volume of Water Purged gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.
 S/60 =

Time to evacuate two casing volumes (2V)
 T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input type="checkbox"/>	HCL	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologics	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Chloride

If preservative is used, specify Type and Quantity of Preservative:

Final Depth

Sample Time

 See instruction

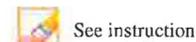
Comment

Arrived on site at 1423 Tanner and Garrin present for purge. Purge began at 1425
 Purged well for a total of 4 minutes and 20 seconds. Purged well dry!
 Purge ended at 1429. Left site at 1431. Water was mostly clear.
 Arrived on site at 0740 Tanner and Garrin present to collect samples. Depth to water was 38.60
 samples bailed at 0745 Left site at 0747

TWN-03 02-18-2015 Do not touch this cell (SheetName)



**ATTACHMENT 1-2
 WHITE MESA URANIUM MILL
 FIELD DATA WORKSHEET FOR GROUNDWATER**



Description of Sampling Event: 1st Quarter Nitrate 2015

Location (well name): TWN-04 Sampler Name and initials: Tanner Holliday/TH

Field Sample ID TWN-04_02182015

Date and Time for Purging 2/18/2015 and Sampling (if different) N/A

Well Purging Equip Used: pump or bailer Well Pump (if other than Bennet) Grundfos

Purging Method Used: 2 casings 3 casings

Sampling Event Quarterly Nitrate Prev. Well Sampled in Sampling Event TWN-07

pH Buffer 7.0 7.0 pH Buffer 4.0 4.0

Specific Conductance 1000 μ MHOS/ cm Well Depth(0.01ft): 125.70

Depth to Water Before Purging 53.00 Casing Volume (V) 4" Well: 47.47 (.653h)
 3" Well: 0 (.367h)

Weather Cond. Sunny Ext'l Amb. Temp. °C (prior sampling event) 9°

Time	<u>1253</u>	Gal. Purged	<u>88</u>
Conductance	<u>1063</u>	pH	<u>6.52</u>
Temp. °C	<u>14.75</u>		
Redox Potential Eh (mV)	<u>226</u>		
Turbidity (NTU)	<u>0</u>		

Time	<u>1254</u>	Gal. Purged	<u>99</u>
Conductance	<u>1066</u>	pH	<u>6.52</u>
Temp. °C	<u>14.72</u>		
Redox Potential Eh (mV)	<u>225</u>		
Turbidity (NTU)	<u>0</u>		

Time	<u>1255</u>	Gal. Purged	<u>110</u>
Conductance	<u>1063</u>	pH	<u>6.52</u>
Temp. °C	<u>14.73</u>		
Redox Potential Eh (mV)	<u>224</u>		
Turbidity (NTU)	<u>0</u>		

Time	<u>1256</u>	Gal. Purged	<u>121</u>
Conductance	<u>1063</u>	pH	<u>6.52</u>
Temp. °C	<u>14.72</u>		
Redox Potential Eh (mV)	<u>224</u>		
Turbidity (NTU)	<u>0</u>		

Volume of Water Purged gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.
 S/60 =

Time to evacuate two casing volumes (2V)
 T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input type="checkbox"/>	HCL	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologics	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

If preservative is used, specify Type and Quantity of Preservative:

Final Depth

Sample Time

 See instruction

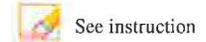
Comment

Arrived on site at 1241 Tanner and Garrin present for purge and sampling event.
 Purge began at 1245. Purged well for a total of 11 minutes, water was clear
 Purge ended and samples collected at 1256. Left site at 1259

TWN-04 02-18-2015 Do not touch this cell (SheetName)



**ATTACHMENT 1-2
 WHITE MESA URANIUM MILL
 FIELD DATA WORKSHEET FOR GROUNDWATER**



Description of Sampling Event: 1st Quarter Nitrate 2015

Location (well name): TWN-07 Sampler Name and initials: Tanner Holliday/TH

Field Sample ID: TWN-07_02192015

Date and Time for Purging: 2/18/2015 and Sampling (if different): 2/19/2015

Well Purging Equip Used: pump or bailer Well Pump (if other than Bennet): Grundfos

Purging Method Used: 2 casings 3 casings

Sampling Event: Quarterly Nitrate Prev. Well Sampled in Sampling Event: TWN-07R

pH Buffer 7.0: 7.0 pH Buffer 4.0: 4.0

Specific Conductance: 1000 μ MHOS/ cm Well Depth(0.01ft): 105.00

Depth to Water Before Purging: 85.90 Casing Volume (V) 4" Well: 12.47 (.653h)
 3" Well: 0 (.367h)

Weather Cond. Sunny Ext'l Amb. Temp. °C (prior sampling event) 8°

Time	<u>1221</u>	Gal. Purged	<u>16.50</u>
Conductance	<u>1253</u>	pH	<u>7.11</u>
Temp. °C	<u>14.79</u>		
Redox Potential Eh (mV)	<u>252</u>		
Turbidity (NTU)	<u>0</u>		

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time	<u>0734</u>	Gal. Purged	<u>0</u>
Conductance	<u>1229</u>	pH	<u>6.20</u>
Temp. °C	<u>13.98</u>		
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time	<u>0736</u>	Gal. Purged	<u>0</u>
Conductance	<u>1237</u>	pH	<u>6.25</u>
Temp. °C	<u>14.01</u>		
Redox Potential Eh (mV)			
Turbidity (NTU)			

Before

After

Volume of Water Purged gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.
 S/60 =

Time to evacuate two casing volumes (2V)
 T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input type="checkbox"/>	HCL	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologies	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

If preservative is used, specify Type and Quantity of Preservative:

Final Depth

Sample Time

 See instruction

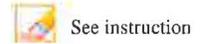
Comment

Arrived on site at 1217. Tanner and Garrin present for purge. Purge began at 1220
 Purged well for a total of 1 minute 30 seconds. Purged well dry! Water was clear.
 Purge ended at 1221. Left site at 1224
 Arrived on site at 0731 Tanner and Garrin present to collect samples. Depth to water was
 95.84 samples bailed at 0735 Left site at 0737

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**ATTACHMENT 1-2
 WHITE MESA URANIUM MILL
 FIELD DATA WORKSHEET FOR GROUNDWATER**



Description of Sampling Event:

Location (well name): Sampler Name and initials:

Field Sample ID

Date and Time for Purging and Sampling (if different)

Well Purging Equip Used: pump or bailer Well Pump (if other than Bennet)

Purging Method Used: 2 casings 3 casings

Sampling Event Prev. Well Sampled in Sampling Event

pH Buffer 7.0 pH Buffer 4.0

Specific Conductance μ MHOS/ cm Well Depth(0.01ft):

Depth to Water Before Purging Casing Volume (V) 4" Well: (.653h)
 3" Well: (.367h)

Weather Cond. Ext'l Amb. Temp. °C (prior sampling event)

Time	<input type="text" value="1156"/>	Gal. Purged	<input type="text" value="121"/>
Conductance	<input type="text" value="2.0"/>	pH	<input type="text" value="8.35"/>
Temp. °C	<input type="text" value="11.05"/>		
Redox Potential Eh (mV)	<input type="text" value="205"/>		
Turbidity (NTU)	<input type="text" value="0"/>		

Time	<input type="text"/>	Gal. Purged	<input type="text"/>
Conductance	<input type="text"/>	pH	<input type="text"/>
Temp. °C	<input type="text"/>		
Redox Potential Eh (mV)	<input type="text"/>		
Turbidity (NTU)	<input type="text"/>		

Time	<input type="text"/>	Gal. Purged	<input type="text"/>
Conductance	<input type="text"/>	pH	<input type="text"/>
Temp. °C	<input type="text"/>		
Redox Potential Eh (mV)	<input type="text"/>		
Turbidity (NTU)	<input type="text"/>		

Time	<input type="text"/>	Gal. Purged	<input type="text"/>
Conductance	<input type="text"/>	pH	<input type="text"/>
Temp. °C	<input type="text"/>		
Redox Potential Eh (mV)	<input type="text"/>		
Turbidity (NTU)	<input type="text"/>		

Volume of Water Purged gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.
 S/60 =

Time to evacuate two casing volumes (2V)
 T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input type="checkbox"/>	HCL	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologics	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

If preservative is used, specify Type and Quantity of Preservative:

Final Depth

Sample Time

 See instruction

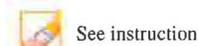
Comment

Arrived on site at 1140 Tanner and Garrin present for rinsate.
 Rinsate began at 1145 Pumped 50 Gallons of soap water and
 100 Gallons of DI water. Rinsate ended at 1200
 Samples collected at 1157
 Left site at 1202

TWN-07R 02-18-2015 Do not touch this cell (SheetName)



**ATTACHMENT 1-2
 WHITE MESA URANIUM MILL
 FIELD DATA WORKSHEET FOR GROUNDWATER**



Description of Sampling Event: 1st Quarter Nitrate 2015

Location (well name): TWN-18 Sampler Name and initials: Tanner Holliday/TH

Field Sample ID TWN-18_02182015

Date and Time for Purging 2/18/2015 and Sampling (if different) N/A
2/18/2015

Well Purging Equip Used: pump or bailer Well Pump (if other than Bennet) Grundfos

Purging Method Used: 2 casings 3 casings

Sampling Event Quarterly Nitrate Prev. Well Sampled in Sampling Event TWN-01

pH Buffer 7.0 7.0 pH Buffer 4.0 4.0

Specific Conductance 1000 μMHOS/ cm Well Depth(0.01ft): 145.00

Depth to Water Before Purging 59.78 Casing Volume (V) 4" Well: 55.64 (.653h)
 3" Well: 0 (.367h)

Weather Cond. Sunny Ext'l Amb. Temp. °C (prior sampling event) 9°

Time	<u>1358</u>	Gal. Purged	<u>99</u>
Conductance	<u>2247</u>	pH	<u>6.16</u>
Temp. °C	<u>14.53</u>		
Redox Potential Eh (mV)	<u>179</u>		
Turbidity (NTU)	<u>0</u>		

Time	<u>1359</u>	Gal. Purged	<u>110</u>
Conductance	<u>2242</u>	pH	<u>6.16</u>
Temp. °C	<u>14.53</u>		
Redox Potential Eh (mV)	<u>179</u>		
Turbidity (NTU)	<u>0</u>		

Time	<u>1400</u>	Gal. Purged	<u>121</u>
Conductance	<u>2250</u>	pH	<u>6.16</u>
Temp. °C	<u>14.54</u>		
Redox Potential Eh (mV)	<u>178</u>		
Turbidity (NTU)	<u>0</u>		

Time	<u>1401</u>	Gal. Purged	<u>132</u>
Conductance	<u>2247</u>	pH	<u>6.16</u>
Temp. °C	<u>14.52</u>		
Redox Potential Eh (mV)	<u>178</u>		
Turbidity (NTU)	<u>0</u>		

Volume of Water Purged gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.
 S/60 =

Time to evacuate two casing volumes (2V)
 T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input type="checkbox"/>	HCL	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologies	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

If preservative is used, specify Type and Quantity of Preservative:

Final Depth Sample Time

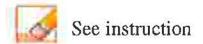
 See instruction

Comment
 Arrived on site at 1345 Tanner and Garrin present for purge and sampling event.
 Purge began at 1349 Purged well for a total of 12 minutes. water was clear
 Purge ended and samples collected at 1401. Left site at 1403

TWN-18 02-18-2015 Do not touch this cell (SheetName)



**ATTACHMENT 1-2
 WHITE MESA URANIUM MILL
 FIELD DATA WORKSHEET FOR GROUNDWATER**



Description of Sampling Event: 1st Quarter Chloroform 2015

Location (well name): TW4-22

Sampler Name and initials: Tanner Holliday/TH

Field Sample ID TW4-22_03092015

Date and Time for Purging 3/9/2015

and Sampling (if different) N/A

Well Purging Equip Used: pump or bailer

Well Pump (if other than Bennet) Continuous

Purging Method Used: 2 casings 3 casings

Sampling Event Quarterly Chloroform

Prev. Well Sampled in Sampling Event TW4-24

pH Buffer 7.0 7.0

pH Buffer 4.0 4.0

Specific Conductance 1000 μ MHOS/ cm

Well Depth(0.01ft): 113.50

Depth to Water Before Purging 59.67

Casing Volume (V) 4" Well: 35.15 (.653h)
 3" Well: 0 (.367h)

Weather Cond. Sunny

Ext'l Amb. Temp. °C (prior sampling event) 10°

Time	<u>1335</u>	Gal. Purged	<u>0</u>
Conductance	<u>6073</u>	pH	<u>6.28</u>
Temp. °C	<u>15.25</u>		
Redox Potential Eh (mV)	<u>200</u>		
Turbidity (NTU)	<u>0</u>		

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Volume of Water Purged gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.
 S/60 =

Time to evacuate two casing volumes (2V)
 T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	HCL	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologics	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

If preservative is used, specify Type and Quantity of Preservative:

Final Depth

Sample Time

 See instruction

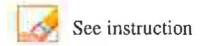
Comment

Arrived on site at 1333 Tanner and Garrin present to collect samples.
 Samples collected at 1336 water was clear
 Left site at 1338
 Continuous Pumping well

TW4-22 03-09-2015 Do not touch this cell (SheetName)



**ATTACHMENT 1-2
 WHITE MESA URANIUM MILL
 FIELD DATA WORKSHEET FOR GROUNDWATER**



Description of Sampling Event: 1st Quarter Chloroform 2015

Location (well name): TW4-24 Sampler Name and initials: Tanner Holliday/TH

Field Sample ID: TW4-24_03092015

Date and Time for Purging: 3/9/2015 and Sampling (if different): N/A

Well Purging Equip Used: pump or bailer Well Pump (if other than Bennet): Continuous

Purging Method Used: 2 casings 3 casings

Sampling Event: Quarterly Chloroform Prev. Well Sampled in Sampling Event: TW4-25

pH Buffer 7.0: 7.0 pH Buffer 4.0: 4.0

Specific Conductance: 1000 μ MHOS/ cm Well Depth(0.01ft): 112.50

Depth to Water Before Purging: 64.80 Casing Volume (V) 4" Well: 31.14 (.653h)
 3" Well: 0 (.367h)

Weather Cond. Sunny Ext'l Amb. Temp. °C (prior sampling event) 10°

Time	<u>1325</u>	Gal. Purged	<u>0</u>
Conductance	<u>7593</u>	pH	<u>6.24</u>
Temp. °C	<u>15.61</u>		
Redox Potential Eh (mV)	<u>220</u>		
Turbidity (NTU)	<u>0</u>		

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Volume of Water Purged gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.
 S/60 =

Time to evacuate two casing volumes (2V)
 T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	HCL	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologies	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

If preservative is used, specify Type and Quantity of Preservative:

Final Depth

Sample Time

 See instruction

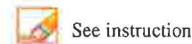
Comment

Arrived on site at 1323 Tanner and Garrin present to collect samples.
 Samples collected at 1326 water was clear
 Left site at 1328
 Continuous Pumping well

TW4-24 03-09-2015 Do not touch this cell (SheetName)



**ATTACHMENT 1-2
 WHITE MESA URANIUM MILL
 FIELD DATA WORKSHEET FOR GROUNDWATER**



Description of Sampling Event: 1ST Quarter Chloroform 2015

Location (well name): TW4-25

Sampler Name and initials: Tanner Holliday / TH

Field Sample ID TW4-25_03092015

Date and Time for Purging 3/9/2015

and Sampling (if different) N/A

Well Purging Equip Used: pump or bailer

Well Pump (if other than Bennet) Continuous

Purging Method Used: 2 casings 3 casings

Sampling Event Quarterly Chloroform

Prev. Well Sampled in Sampling Event TW4-19

pH Buffer 7.0 7.0

pH Buffer 4.0 4.0

Specific Conductance 1000 μ MHOS/ cm

Well Depth(0.01ft): 134.80

Depth to Water Before Purging 57.60

Casing Volume (V) 4" Well: 50.41 (.653h)
 3" Well: 0 (.367h)

Weather Cond. Sunny

Ext'l Amb. Temp. °C (prior sampling event) 9°

Time	<u>1259</u>	Gal. Purged	<u>0</u>
Conductance	<u>2891</u>	pH	<u>6.56</u>
Temp. °C	<u>15.00</u>		
Redox Potential Eh (mV)	<u>149</u>		
Turbidity (NTU)	<u>0</u>		

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Volume of Water Purged gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.

S/60 =

Time to evacuate two casing volumes (2V)

T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	HCL	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologics	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

If preservative is used, specify Type and Quantity of Preservative:

Final Depth

Sample Time

 See instruction

Comment

Arrived on site at 1257 Tanner and Garrin present to collect samples,
 Samples collected at 1300 water was clear
 Left site at 1303
 Continuous Pumping Well

TW4-25 03-09-2015 Do not touch this cell (SheetName)



**ATTACHMENT 1-2
 WHITE MESA URANIUM MILL
 FIELD DATA WORKSHEET FOR GROUNDWATER**



Description of Sampling Event: 1st Quarter Chloroform 2015

Location (well name): TW4-60

Sampler Name and initials: Tanner Holliday/TH

Field Sample ID: TW4-60_03172015

Date and Time for Purging: 3/17/2015

and Sampling (if different): N/A

Well Purging Equip Used: pump or bailer

Well Pump (if other than Bennet): Grundfos

Purging Method Used: 2 casings 3 casings

Sampling Event: Quarterly Chloroform

Prev. Well Sampled in Sampling Event: MW-32

pH Buffer 7.0: 7.0

pH Buffer 4.0: 4.0

Specific Conductance: 1000 μ MHOS/ cm

Well Depth(0.01ft): 0

Depth to Water Before Purging: -18.60-0

Casing Volume (V) 4" Well: 0 (.653h)
 3" Well: 0 (.367h)

Weather Cond.: Clear

Ext'l Amb. Temp. °C (prior sampling event): 20°

Time	<u>0854</u>	Gal. Purged	<u>0</u>
Conductance	<u>3.5</u>	pH	<u>7.12</u>
Temp. °C	<u>14.43</u>		
Redox Potential Eh (mV)	<u>250</u>		
Turbidity (NTU)	<u>2.1</u>		

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Volume of Water Purged gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.
 S/60 =

Time to evacuate two casing volumes (2V)
 T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	HCL	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologics	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

If preservative is used, specify Type and Quantity of Preservative:

Final Depth

Sample Time

 See instruction

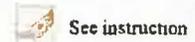
Comment

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TW4-60 03-17-2015 Do not touch this cell (SheetName)



ATTACHMENT 1-2
 WHITE MESA URANIUM MILL
 FIELD DATA WORKSHEET FOR GROUNDWATER



Description of Sampling Event: 1st Quarter Nitrate 2015

Location (well name): TWN-60

Sampler Name and initials: Tanner Holliday/TH

Field Sample ID: TWN-60-02192015

TWN-60-02192015

Date and Time for Purging: 2/19/2015

and Sampling (if different): N/A

Well Purging Equip Used: pump or bailer

Well Pump (if other than Bennet): C N/A

Purging Method Used: 2 casings 3 casings

Sampling Event: Quarterly Nitrate

Prev. Well Sampled in Sampling Event: TWN-03

pH Buffer 7.0: 7.0

pH Buffer 4.0: 4.0

Specific Conductance: 1000 µMHOS/cm

Well Depth(0.01ft): 0

Depth to Water Before Purging: 0

Casing Volume (V) 4" Well: 0 (.653h)
 3" Well: 0 (.367h)

Weather Cond.: Clear

Ext'l Amb. Temp. °C (prior sampling event): 20°

Time	<u>0709</u>	Gal. Purged	<u>0</u>
Conductance	<u>1.2</u>	pH	<u>7.37</u>
Temp. °C	<u>15.24</u>		
Redox Potential Eh (mV)	<u>189</u>		
Turbidity (NTU)	<u>1.2</u>		

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

Time		Gal. Purged	
Conductance		pH	
Temp. °C			
Redox Potential Eh (mV)			
Turbidity (NTU)			

65 1025 9.11 - 06/03/2015 - 06/21/15 08:21:13 07/01/15 / Sample - (1942) Printed 4/15/2015 4:53 PM Tom Wamboldt

Volume of Water Purged gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.
 S/60 =

Time to evacuate two casing volumes (2V)
 T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input type="checkbox"/>	HCL	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologics	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

If preservative is used, specify Type and Quantity of Preservative:

Final Depth

Sample Time

 See instruction

Comment

DI Sample collected in lab at 0710

05/2014 1:23 06/06/2012 08:21:13

Volume of Water Purged gallon(s)

Pumping Rate Calculation

Flow Rate (Q), in gpm.
S/60 =

Time to evacuate two casing volumes (2V)
T = 2V/Q =

Number of casing volumes evacuated (if other than two)

If well evacuated to dryness, number of gallons evacuated

Name of Certified Analytical Laboratory if Other Than Energy Labs

Type of Sample	Sample Taken		Sample Vol (indicate if other than as specified below)	Filtered		Preservative Type	Preservative Added	
	Y	N		Y	N		Y	N
VOCs	<input type="checkbox"/>	<input type="checkbox"/>	3x40 ml	<input type="checkbox"/>	<input type="checkbox"/>	HCL	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100 ml	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H2SO4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heavy Metals	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
All Other Non Radiologics	<input type="checkbox"/>	<input type="checkbox"/>	250 ml	<input type="checkbox"/>	<input type="checkbox"/>	No Preserv.	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/>	<input type="checkbox"/>	1,000 ml	<input type="checkbox"/>	<input type="checkbox"/>	HNO3	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample volume	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

If preservative is used, specify Type and Quantity of Preservative:

Final Depth

Sample Time

 See instruction

Comment

Duplicate of TWW-01

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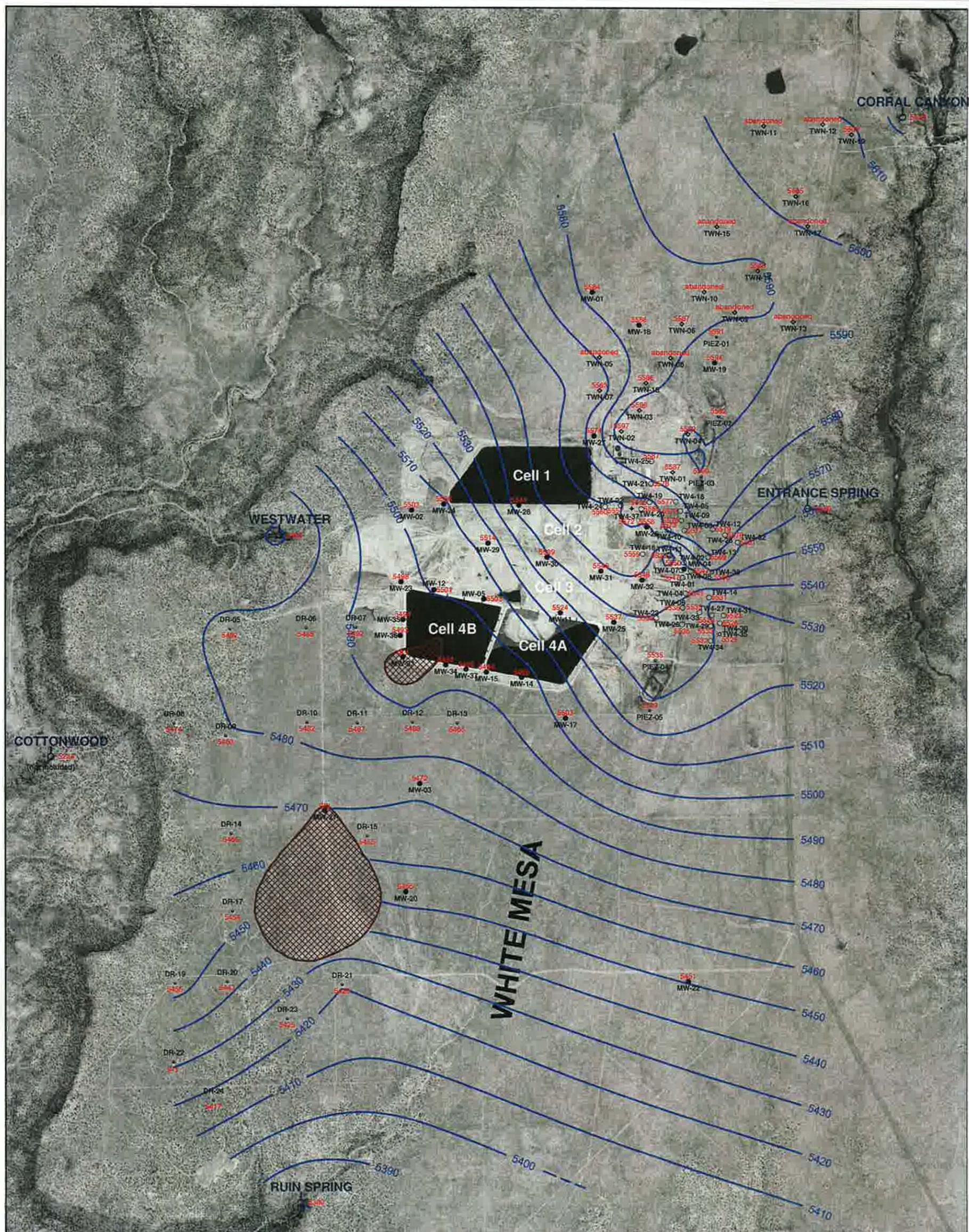
Tab C

Kriged Current Quarter Groundwater Contour Map, Capture Zone Map, Capture Zone Details Map, and
Weekly, Monthly and Quarterly Depth to Water Data

NAME: Garrin Palmer, Tanner Holliday

DATE: 3/26/15

TIME	WELL	Depth to Water (ft.)	TIME	WELL	Depth to Water (ft.)	TIME	WELL	Depth to Water (ft.)	TIME	WELL	Depth to Water (ft.)
1300	MW-1	64.10	1212	MW-4	71.20	1245	PIEZ-1	64.52	NA	DR-1	ABANDON
1327	MW-2	109.74	1213	TW4-1	72.08	1238	PIEZ-2	37.09	NA	DR-2	ABANDON
958	MW-3	82.71	1211	TW4-2	74.79	1235	PIEZ-3	47.98	937	DR-5	83.25
958	MW-3A	84.81	1218	TW4-3	55.50	1243	PIEZ-4	56.30	934	DR-6	94.28
1319	MW-5	106.35	1214	TW4-4	72.00	1240	PIEZ-5	55.57	1307	DR-7	92.31
1248	MW-11	86.43	1220	TW4-5	63.33	1217	TWN-1	61.00	929	DR-8	51.22
1321	MW-12	108.47	1235	TW4-6	70.75	1214	TWN-2	29.98	926	DR-9	86.71
1254	MW-14	103.38	1212	TW4-7	72.50	1227	TWN-3	38.30	924	DR-10	78.26
1257	MW-15	106.35	1216	TW4-8	74.51	1232	TWN-4	52.70	952	DR-11	98.40
1004	MW-17	72.34	1221	TW4-9	61.24		TWN-5	ABANDON	955	DR-12	90.66
1257	MW-18	71.59	1223	TW4-10	61.12	1254	TWN-6	77.65	1001	DR-13	69.96
1241	MW-19	60.47	1210	TW4-11	91.00	1303	TWN-7	85.93	920	DR-14	76.50
852	MW-20	85.72	1024	TW4-12	44.95		TWN-8	ABANDON	947	DR-15	93.11
847	MW-22	66.90	1023	TW4-13	50.44		TWN-9	ABANDON		DR-16	ABANDON
1313	MW-23	114.40	1019	TW4-14	81.91		TWN-10	ABANDON	916	DR-17	65.02
1314	MW-24	113.44	1209	TW4-15	67.90		TWN-11	ABANDON		DR-18	ABANDON
1243	MW-25	75.73	1225	TW4-16	65.00		TWN-12	ABANDON	905	DR-19	63.20
1209	MW-26	67.90	1228	TW4-17	77.00		TWN-13	ABANDON	903	DR-20	55.52
1310	MW-27	53.78	1221	TW4-18	64.10	1248	TWN-14	61.56	856	DR-21	101.35
1318	MW-28	75.46	1045	TW4-19	63.40		TWN-15	ABANDON	913	DR-22	DRY
1324	MW-29	101.10	1206	TW4-20	63.88	1250	TWN-16	47.66	859	DR-23	70.72
1321	MW-30	75.49	1223	TW4-21	61.16		TWN-17	ABANDON	909	DR-24	44.36
1229	MW-31	68.26	1202	TW4-22	72.00	1230	TWN-18	59.79	NA	DR-25	ABANDON
1228	MW-32	77.00	1230	TW4-23	67.90	1034	TWN-19	53.40			
1303	MW-33	DRY	1200	TW4-24	65.88						
1302	MW-34	107.96	1225	TW4-25	57.51						
1312	MW-35	112.50	1237	TW4-26	65.25						
1310	MW-36	110.64	1010	TW4-27	80.23						
1259	MW-37	107.49	1025	TW4-28	38.89						
			1018	TW4-29	73.00						
			1013	TW4-30	76.58						
			1011	TW4-31	81.25						
			1027	TW4-32	50.49						
			1008	TW4-33	71.59						
			1016	TW4-34	70.97						
			1014	TW4-35	74.31						
			1021	TW4-36	56.80						
			1204	TW4-37	60.17						



EXPLANATION

-  estimated dry area
-  TW4-37 temporary perched monitoring well installed March, 2015 showing elevation in feet amsl
-  MW-5 perched monitoring well showing elevation in feet amsl
-  TW4-12 temporary perched monitoring well showing elevation in feet amsl
-  TWN-7 temporary perched nitrate monitoring well showing elevation in feet amsl
-  PIEZ-1 perched piezometer showing elevation in feet amsl
-  TW4-35 temporary perched monitoring well installed May, 2014 showing elevation in feet amsl
-  RUIN SPRING seep or spring showing elevation in feet amsl

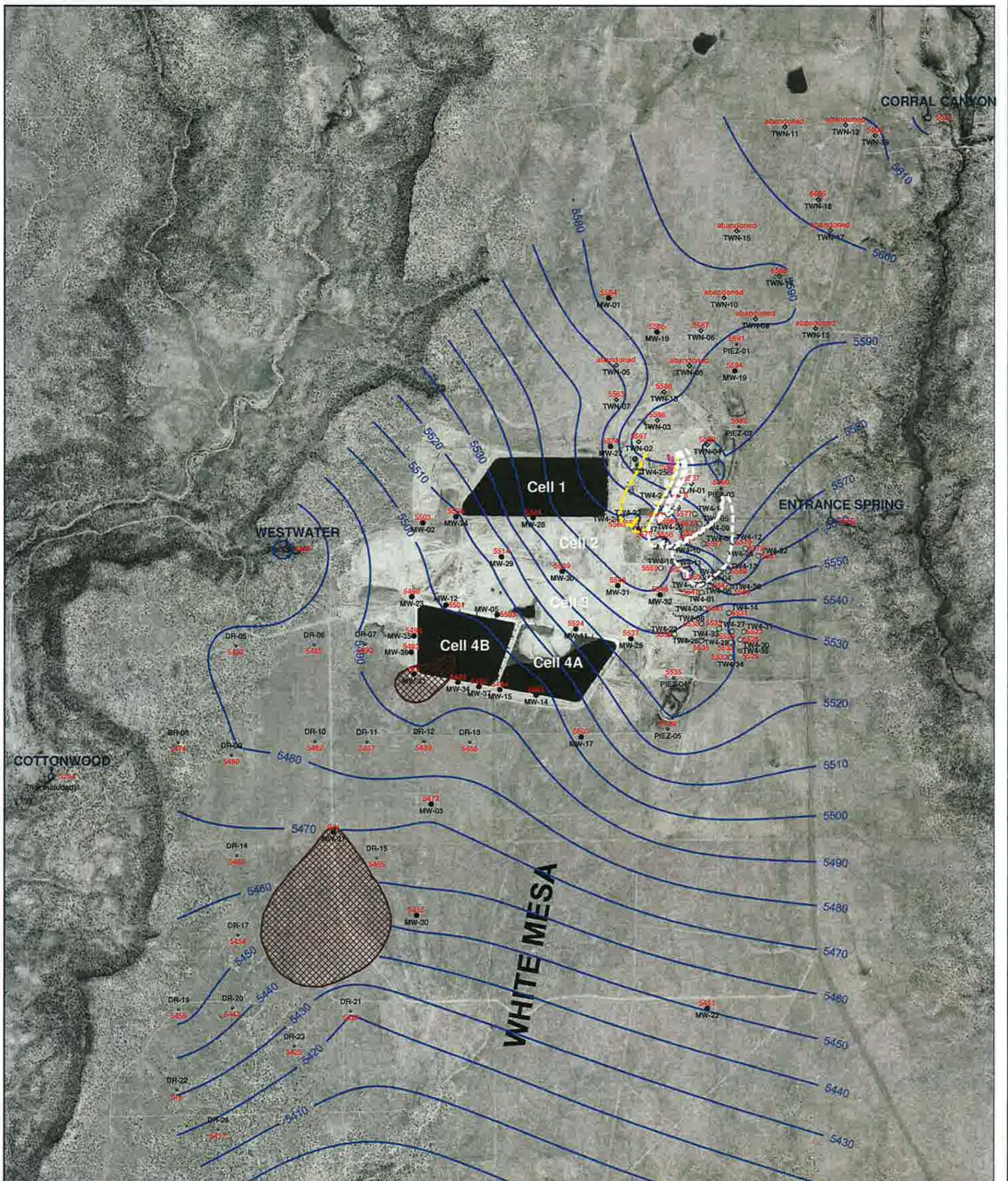
NOTE: MW-4, MW-26, TW4-1, TW4-2, TW4-4, TW4-11, TW4-19, and TW4-20 are chloroform pumping wells; TW4-22, TW4-24, TW4-25, and TWN-2 are nitrate pumping wells



**HYDRO
GEO
CHEM, INC.**

**KRIGED 1st QUARTER, 2015 WATER LEVELS
WHITE MESA SITE**

APPROVED	DATE	REFERENCE	FIGURE
		H:\718000\may15\WL\Uwl0315_rev.srf	C-1



EXPLANATION

-  estimated nitrate capture zone boundary stream tubes resulting from pumping
-  estimated chloroform capture zone boundary stream tubes resulting from pumping
-  estimated dry area
-  TW4-37 temporary perched monitoring well installed March, 2015 showing elevation in feet amsl
-  MW-5 perched monitoring well showing elevation in feet amsl
-  TW4-12 temporary perched monitoring well showing elevation in feet amsl
-  TWN-7 temporary perched nitrate monitoring well showing elevation in feet amsl
-  PIEZ-1 perched piezometer showing elevation in feet amsl
-  TW4-35 temporary perched monitoring well installed May, 2014 showing elevation in feet amsl
-  RUIN SPRING seep or spring showing elevation in feet amsl

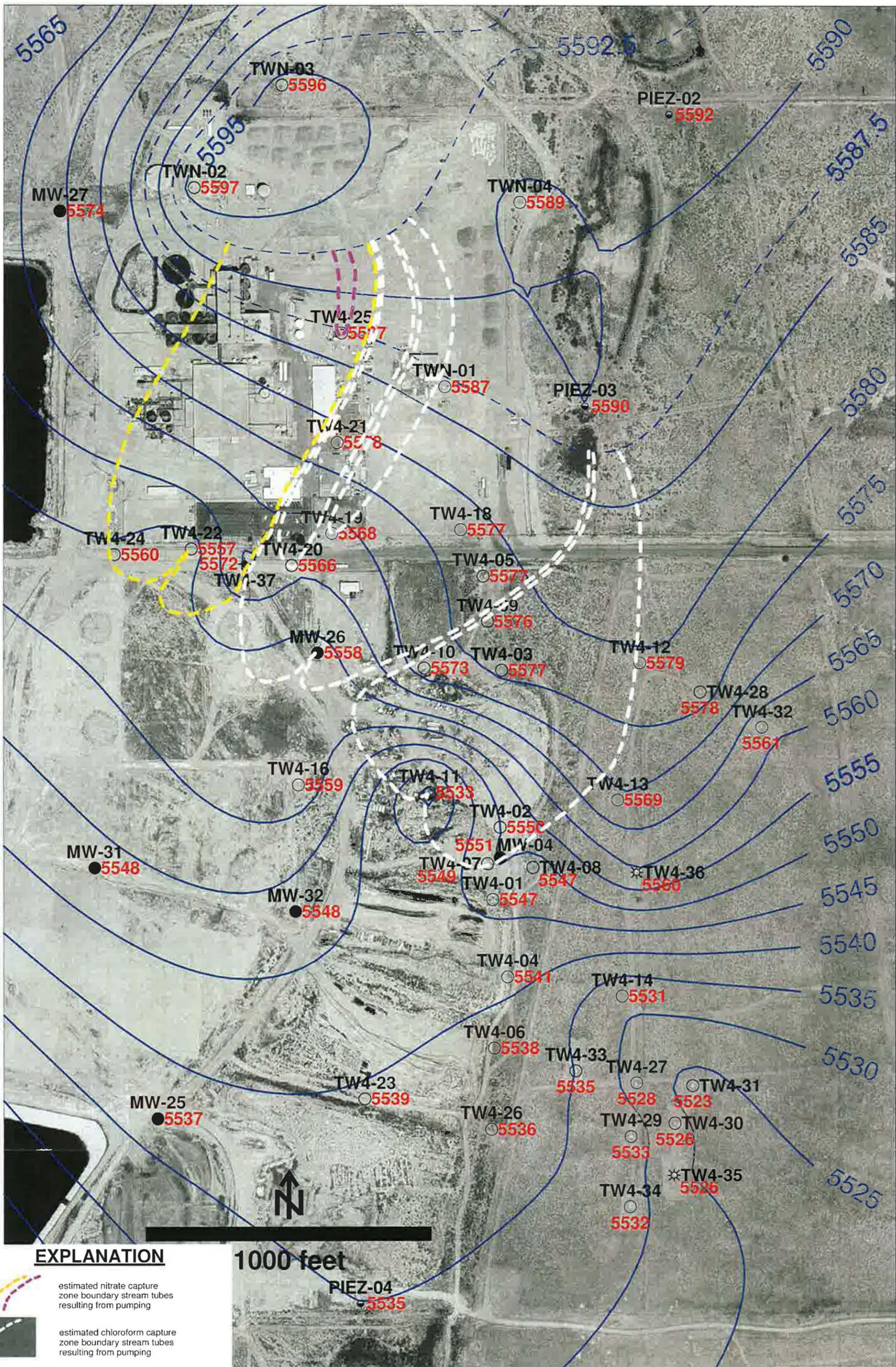
NOTE: MW-4, MW-26, TW4-1, TW4-2, TW4-4, TW4-11, TW4-19, and TW4-20 are chloroform pumping wells; TW4-22, TW4-24, TW4-25, and TWN-2 are nitrate pumping wells



**HYDRO
GEO
CHEM, INC.**

**KRIGED 1st QUARTER, 2015 WATER LEVELS
AND ESTIMATED CAPTURE ZONES
WHITE MESA SITE**

APPROVED	DATE	REFERENCE	H:/718000/may15/ nitrate/Uwl0315NTcz2_rev.srf	FIGURE C-2
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EXPLANATION

- estimated nitrate capture zone boundary stream tubes resulting from pumping
- estimated chloroform capture zone boundary stream tubes resulting from pumping

- TW4-37 5572 temporary perched monitoring well installed March, 2015 showing elevation in feet amsl
- MW-4 5551 perched monitoring well showing elevation in feet amsl
- TW4-7 5549 temporary perched monitoring well showing elevation in feet amsl
- PIEZ-2 5592 perched piezometer showing elevation in feet amsl
- TW4-35 5526 temporary perched monitoring well installed May, 2014 showing elevation in feet amsl

1000 feet

NOTE: MW-4, MW-26, TW4-1, TW4-2, TW4-4, TW4-11, TW4-19, and TW4-20 are chloroform pumping wells; TW4-22, TW4-24, TW4-25, and TWN-2 are nitrate pumping wells

<p>HYDRO GEO CHEM, INC.</p>	<p>KRIGED 1st QUARTER, 2015 WATER LEVELS AND ESTIMATED CAPTURE ZONES WHITE MESA SITE (detail map)</p>			
	APPROVED	DATE	REFERENCE	H:/718000/ may15/nitrate/Uwl0315NTcz_rev.srf

Weekly Inspection Form

Date 1/5/15

Name Garrin Palmer

Time	Well	Depth*	Comments	System Operational (If no note any problems/corrective actions)
—	MW-4	—	Flow —	Yes <input checked="" type="radio"/> No
			Meter —	Yes <input checked="" type="radio"/> No
—	MW-26	—	Flow —	Yes <input checked="" type="radio"/> No
			Meter —	Yes <input checked="" type="radio"/> No
1300	TW4-19	67.42	Flow 11.0 GPM	<input checked="" type="radio"/> Yes No
			Meter 3089517.00	<input checked="" type="radio"/> Yes No
—	TW4-20	—	Flow —	Yes <input checked="" type="radio"/> No
			Meter —	Yes <input checked="" type="radio"/> No
—	TW4-4	—	Flow —	Yes <input checked="" type="radio"/> No
		—	Meter —	Yes <input checked="" type="radio"/> No
1414	TWN-2	32.60	Flow 18.2 GPM	<input checked="" type="radio"/> Yes No
			Meter 375947.50	<input checked="" type="radio"/> Yes No
—	TW4-22	—	Flow —	Yes <input checked="" type="radio"/> No
			Meter —	Yes <input checked="" type="radio"/> No
—	TW4-24	—	Flow —	Yes <input checked="" type="radio"/> No
			Meter —	Yes <input checked="" type="radio"/> No
1410	TW4-25	62.00	Flow 16.8 GPM	<input checked="" type="radio"/> Yes No
			Meter 1010984.90	<input checked="" type="radio"/> Yes No

Operational Problems (Please list well number):

MW-4, MW-26, TW4-20, TW4-4, TW4-22, TW4-24 not operational! Discharge line frozen. New line should be complete by the end of the week.

Corrective Action(s) Taken (Please list well number):

* Depth is measured to the nearest 0.01 feet.

Weekly Inspection Form

Date 11/2/15

Name Garrin Palmer, Tanner Halliday

Time	Well	Depth*	Comments	System Operational (If no note any problems/corrective actions)	
				Yes	No
1539	MW-4	70.58	Flow 4.8 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 555520.90	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1536	MW-26	72.93	Flow 12.0 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 480530.41	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1404	TW4-19	59.14	Flow ———	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
			Meter 3093730.00	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
1528	TW4-20	69.53	Flow 8.0 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 46025.45	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1543	TW4-4	69.70	Flow 10.4 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 27494.60	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1518	TWN-2	41.30	Flow 18.4 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 378681.80	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1525	TW4-22	60.21	Flow 17.4 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 196517.60	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1522	TW4-24	65.83	Flow 17.8 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 1704371.90	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1514	TW4-25	58.78	Flow 16.4 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 1016370.90	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Operational Problems (Please list well number): TW4-19 was temporarily shut off due to problems with new discharge line.

Corrective Action(s) Taken (Please list well number): Notified maintenance to repair line.

* Depth is measured to the nearest 0.01 feet.

Weekly Inspection Form

Date 1/19/19

Name Garcia Palmer, Tanner Holliday

Time	Well	Depth*	Comments	System Operational (If no note any problems/corrective actions)
1446	MW-4	70.91	Flow 4.5 GPM Meter 561927.33	(Yes) No (Yes) No
1435	MW-26	66.60	Flow 12.0 GPM Meter 482777.30	(Yes) No (Yes) No
1407	TW4-19	68.06	Flow 12.0 GPM Meter 3097576.00	(Yes) No (Yes) No
1430	TW4-20	66.02	Flow 8.6 GPM Meter 47388.03	(Yes) No (Yes) No
1453	TW4-4	70.10	Flow 11.6 GPM Meter 3617.90	(Yes) No (Yes) No
1410	TWN-2	32.61	Flow 17.0 GPM Meter 382262.40	(Yes) No (Yes) No
1427	TW4-22	64.97	Flow 18.0 GPM Meter 193499.30	(Yes) No (Yes) No
1424	TW4-24	68.95	Flow 17.9 GPM Meter 1715681.10	(Yes) No (Yes) No
1413	TW4-25	58.05	Flow 14.5 GPM Meter 1016396.60	(Yes) No (Yes) No
1450	TW4-1	69.05	Flow 18.0 GPM Meter 2071.00	(Yes) No (Yes) No
1441	TW4-2	70.0	Flow 18.0 GPM Meter 2457.70	(Yes) No (Yes) No
1438	TW4-11	69.20	Flow 18.0 GPM Meter 1467.00	(Yes) No (Yes) No
—	TW4-21	—	Flow Not in operation Meter —	Yes (No) Yes (No)

Operational Problems (Please list well number): _____

Corrective Action(s) Taken (Please list well number): _____

* Depth is measured to the nearest 0.01 feet.

Weekly Inspection Form

Date 1/26/15

Name Garrin Palmer / Tanner Holliday

Time	Well	Depth*	Comments	System Operational (If no note any problems/corrective actions)
1451	MW-4	72.45	Flow 4.5 GPM Meter 568787.04	<input checked="" type="checkbox"/> Yes No <input checked="" type="checkbox"/> Yes No
1441	MW-26	66.61	Flow 12.0 GPM Meter 489540.96	<input checked="" type="checkbox"/> Yes No <input checked="" type="checkbox"/> Yes No
1414	TW4-19	63.88	Flow 12.0 GPM Meter 3103071.00	<input checked="" type="checkbox"/> Yes No <input checked="" type="checkbox"/> Yes No
1438	TW4-20	65.64	Flow 8.4 GPM Meter 48684.70	<input checked="" type="checkbox"/> Yes No <input checked="" type="checkbox"/> Yes No
1457	TW4-4	70.04	Flow 11.0 GPM Meter 484540.96 9877.50	<input checked="" type="checkbox"/> Yes No <input checked="" type="checkbox"/> Yes No
1428	TWN-2	32.95	Flow 18.2 GPM Meter 385969.40	<input checked="" type="checkbox"/> Yes No <input checked="" type="checkbox"/> Yes No
1434	TW4-22	63.14	Flow 18.0 GPM Meter 195385.70	<input checked="" type="checkbox"/> Yes No <input checked="" type="checkbox"/> Yes No
1431	TW4-24	66.23	Flow 17.8 GPM Meter 1726223.80	<input checked="" type="checkbox"/> Yes No <input checked="" type="checkbox"/> Yes No
1424	TW4-25	90.14	Flow 17.3 GPM Meter 1072217.80	<input checked="" type="checkbox"/> Yes No <input checked="" type="checkbox"/> Yes No
1454	TW4-1	70.00	Flow 18.0 GPM Meter 4542.60	<input checked="" type="checkbox"/> Yes No <input checked="" type="checkbox"/> Yes No
1448	TW4-2	72.10	Flow 18.0 GPM Meter 3459.50 5250.90	<input checked="" type="checkbox"/> Yes No <input checked="" type="checkbox"/> Yes No
14.44	TW4-11	73.51	Flow 18.0 GPM Meter 3488.70	<input checked="" type="checkbox"/> Yes No <input checked="" type="checkbox"/> Yes No
—	TW4-21	—	Flow Not in operation Meter —	Yes <input checked="" type="checkbox"/> No Yes <input checked="" type="checkbox"/> No

Operational Problems (Please list well number): Replaced heat lamp at TW4-25.

Corrective Action(s) Taken (Please list well number): _____

* Depth is measured to the nearest 0.01 feet.

Monthly Depth Check Form

Date 1/28/15

Name Garrin Palmer / Tanner Holliday

<u>Time</u>	<u>Well</u>	<u>Depth*</u>	<u>Time</u>	<u>Well</u>	<u>Depth*</u>
<u>1228</u>	<u>MW-4</u>	<u>70.06</u>	<u>1231</u>	<u>TWN-1</u>	<u>60.71</u>
<u>1235</u>	<u>TW4-1</u>	<u>70.05</u>	<u>1238</u>	<u>TWN-2</u>	<u>32.68</u>
<u>1224</u>	<u>TW4-2</u>	<u>72.46</u>	<u>1240</u>	<u>TWN-3</u>	<u>39.00</u>
<u>1221</u>	<u>TW4-3</u>	<u>55.19</u>	<u>1243</u>	<u>TWN-4</u>	<u>53.57</u>
<u>1237</u>	<u>TW4-4</u>	<u>70.98</u>	<u>1251</u>	<u>TWN-7</u>	<u>85.95</u>
<u>1216</u>	<u>TW4-5</u>	<u>63.25</u>	<u>1246</u>	<u>TWN-18</u>	<u>59.68</u>
<u>1240</u>	<u>TW4-6</u>	<u>70.40</u>	<u>1248</u>	<u>MW-27</u>	<u>53.70</u>
<u>1228</u>	<u>TW4-7</u>	<u>69.78</u>	<u>1256</u>	<u>MW-30</u>	<u>75.41</u>
<u>1232</u>	<u>TW4-8</u>	<u>71.80</u>	<u>1259</u>	<u>MW-31</u>	<u>68.37</u>
<u>1219</u>	<u>TW4-9</u>	<u>61.17</u>			
<u>1215</u>	<u>TW4-10</u>	<u>61.08</u>			
<u>1227</u>	<u>TW4-11</u>	<u>71.80</u>			
<u>1309</u>	<u>TW4-12</u>	<u>44.24</u>			
<u>1308</u>	<u>TW4-13</u>	<u>49.68</u>	<u>1311</u>	<u>TW4-28</u>	<u>38.58</u>
<u>1304</u>	<u>TW4-14</u>	<u>82.18</u>	<u>1303</u>	<u>TW4-29</u>	<u>72.78</u>
<u>1209</u>	<u>TW4-15</u>	<u>67.12</u>	<u>1300</u>	<u>TW4-30</u>	<u>76.57</u>
<u>1303</u>	<u>TW4-16</u>	<u>65.61</u>	<u>1258</u>	<u>TW4-31</u>	<u>81.33</u>
<u>1256</u>	<u>TW4-17</u>	<u>76.40</u>	<u>1313</u>	<u>TW4-32</u>	<u>50.21</u>
<u>1234</u>	<u>TW4-18</u>	<u>64.09</u>	<u>1248</u>	<u>TW4-33</u>	<u>71.30</u>
<u>1333</u>	<u>TW4-19</u>	<u>65.12</u>	<u>1251</u>	<u>TW4-34</u>	<u>70.68</u>
<u>1207</u>	<u>TW4-20</u>	<u>65.82</u>	<u>1302</u>	<u>TW4-35</u>	<u>74.25</u>
<u>1236</u>	<u>TW4-21</u>	<u>62.86</u>	<u>1306</u>	<u>TW4-36</u>	<u>56.96</u>
<u>1208</u>	<u>TW4-22</u>	<u>60.97</u>			
<u>1242</u>	<u>TW4-23</u>	<u>67.55</u>			
<u>1204</u>	<u>TW4-24</u>	<u>66.02</u>			
<u>1236</u>	<u>TW4-25</u>	<u>59.00</u>			
<u>1244</u>	<u>TW4-26</u>	<u>64.90</u>			
<u>1255</u>	<u>TW4-27</u>	<u>80.29</u>			

Comments: (Please note the well number for any comments)

* Depth is measured to the nearest 0.01 feet

Weekly Inspection Form

Date 2/2/2015

Name Tanner Holliday

2/4/15

Time	Well	Depth*	Comments	System Operational (If no note any problems/corrective actions)
1310	MW-4	74.35	Flow 4.8 GPM Meter 575424.97	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No
1330	MW-26	68.46	Flow 12.0 Meter 486898.97	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No
0915	TW4-19	67.60	Flow 12.0 Meter 3109732.08	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No
1335	TW4-20	76.49	Flow 8.1 GPM Meter 49988.56	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No
1301	TW4-4	69.98	Flow 10.7 GPM Meter 15703.6	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No
1314	TWN-2	75.10	Flow 17.3 GPM 18.4 GPM	<input checked="" type="radio"/> Yes <input type="radio"/> No
1357		33.0	Meter 7954.4 389353.4	<input checked="" type="radio"/> Yes <input type="radio"/> No
1409	TW4-22	79.42	Flow 17.90 Meter 197276.6	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No
1406	TW4-24	66.12	Flow 18.0 Meter 173611.79	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No
1351	TW4-25	60.19	Flow 16.1 Meter 1072217.8	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No
1304	TW4-1	79.98	Flow 17.5 Meter 7025.7	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No
1314	TW4-2	75.10	Flow 17.3 GPM Meter 7954.4	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No
1325	TW4-11	94.98	Flow 8.2 GPM 18.0 GPM Meter 5106.7	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No
N/A	TW4-21	N/A	Flow N/A Meter N/A	Yes <input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/>

Operational Problems (Please list well number): _____

Corrective Action(s) Taken (Please list well number): _____

* Depth is measured to the nearest 0.01 feet.

Weekly Inspection Form

Date 2/9/15

Name Garcia Palmer / Tanner Holliday

Time	Well	Depth*	Comments	System Operational (If no note any problems/corrective actions)
1327	MW-4	81.20	Flow 4.5 GPM	<input checked="" type="checkbox"/> Yes No
			Meter 582267.60	<input checked="" type="checkbox"/> Yes No
1459	MW-26	81.15	Flow 10.5 GPM	<input checked="" type="checkbox"/> Yes No
			Meter 488631.55	<input checked="" type="checkbox"/> Yes No
1405	TW4-19	68.60	Flow 11.0 GPM	<input checked="" type="checkbox"/> Yes No
			Meter 3113731.00	<input checked="" type="checkbox"/> Yes No
1455	TW4-20	65.00	Flow 8.8 GPM	<input checked="" type="checkbox"/> Yes No
			Meter 512082.30	<input checked="" type="checkbox"/> Yes No
1333	TW4-4	70.28	Flow 11.0 GPM	<input checked="" type="checkbox"/> Yes No
			Meter 21720.80	<input checked="" type="checkbox"/> Yes No
1445	TWN-2	32.88	Flow 18.6 GPM	<input checked="" type="checkbox"/> Yes No
			Meter 392925.70	<input checked="" type="checkbox"/> Yes No
1452	TW4-22	60.95	Flow 17.8 GPM	<input checked="" type="checkbox"/> Yes No
			Meter 199010.40	<input checked="" type="checkbox"/> Yes No
1448	TW4-24	65.7	Flow 17.4 17.4 GPM	<input checked="" type="checkbox"/> Yes No
			Meter 1745463.10	<input checked="" type="checkbox"/> Yes No
1441	TW4-25	58.81	Flow 16.0 GPM	<input checked="" type="checkbox"/> Yes No
			Meter 1072226.60	<input checked="" type="checkbox"/> Yes No
1330	TW4-1	70.79	Flow 18.0 GPM	<input checked="" type="checkbox"/> Yes No
			Meter 9437.20	<input checked="" type="checkbox"/> Yes No
1324	TW4-2	73.40	Flow 17.0 GPM	<input checked="" type="checkbox"/> Yes No
			Meter 10588.80	<input checked="" type="checkbox"/> Yes No
1320	TW4-11	91.20	Flow 18.0 GPM	<input checked="" type="checkbox"/> Yes No
			Meter 5879.20	<input checked="" type="checkbox"/> Yes No
	TW4-21		Flow	Yes No
			Meter	Yes No

Operational Problems (Please list well number): TW4-21 Not in operation.

Corrective Action(s) Taken (Please list well number): _____

* Depth is measured to the nearest 0.01 feet.

Weekly Inspection Form

Date 2/16/15

Name Garrin Palmer, Tanner Holliday

Time	Well	Depth*	Comments	System Operational (If no note any problems/corrective actions)
1400	MW-4	79.49	Flow 4.4 GPM Meter 588860.81	(Yes) No (Yes) No
1320	MW-26	68.31	Flow 12.0 GPM Meter 491549.03	(Yes) No (Yes) No
1245	TW4-19	62.50	Flow 11.0 GPM Meter 3110051.01	(Yes) No (Yes) No
1317	TW4-20	64.29	Flow 8.7 GPM Meter 52547.00	(Yes) No (Yes) No
1344	TW4-4	70.41	Flow 11.2 GPM Meter 27550.33	(Yes) No (Yes) No
1308	TWN-2	33.05	Flow 18.4 GPM Meter 396602	(Yes) No (Yes) No
1314	TW4-22	59.40	Flow 18.0 GPM Meter 200983.50	(Yes) No (Yes) No
1311	TW4-24	65.39	Flow 17.8 GPM Meter 1753061.40	(Yes) No (Yes) No
1304	TW4-25	58.07	Flow 15.0 GPM Meter 1072237.00	(Yes) No (Yes) No
1340	TW4-1	71.50	Flow 18.0 GPM Meter 11555.10	(Yes) No (Yes) No
1325	TW4-2	73.40	Flow Meter 12987.70	Yes (No) Yes (No)
1323	TW4-11	94.70	Flow 18.0 GPM Meter 6556.70	(Yes) No (Yes) No
	TW4-21		Flow Meter	Yes No Yes No

Operational Problems (Please list well number): TWN-21 not in operation
-lost power to TW4-2.4

Corrective Action(s) Taken (Please list well number): Electricians have been notified for repair.

* Depth is measured to the nearest 0.01 feet.

Weekly Inspection Form

Date 2/24/14

Name Garrin Palmer

Time	Well	Depth*	Comments	System Operational (If no note any problems/corrective actions)
0906	MW-4	80.00	Flow 4.6 GPM Meter 596459.72	(Yes) No (Yes) No
0851	MW-26	65.70	Flow 11.8 GPM Meter 493493.58	(Yes) No (Yes) No
0934	TW4-19	63.60	Flow 8.2 GPM Meter 3123875.00	(Yes) No (Yes) No
0846	TW4-20	64.60	Flow 9.0 GPM Meter 54168.23	(Yes) No (Yes) No
0918	TW4-4	70.42	Flow 10.0 GPM Meter 34015.40	(Yes) No (Yes) No
0828	TWN-2	33.22	Flow 18.8 GPM Meter 400658.70	(Yes) No (Yes) No
0840	TW4-22	62.40	Flow 17.6 GPM Meter 203085.40	(Yes) No (Yes) No
0834	TW4-24	65.20	Flow 18.0 GPM Meter 1763077.00	(Yes) No (Yes) No
0823	TW4-25	57.80	Flow 16.0 GPM Meter 1072258.40	(Yes) No (Yes) No
0912	TW4-1	71.30	Flow 17.8 GPM Meter 14116.40	(Yes) No (Yes) No
0901	TW4-2	74.80	Flow 17.3 GPM Meter 15374.50	(Yes) No (Yes) No
0857	TW4-11	92.50	Flow 19.0 GPM Meter 7250.01	(Yes) No (Yes) No
	TW4-21		Flow Meter	Yes No Yes No

Operational Problems (Please list well number):

TW4-21 not in operation.

Corrective Action(s) Taken (Please list well number):

* Depth is measured to the nearest 0.01 feet.

Monthly Depth Check Form

Date 2/24/14

Name Garrin Palmer

<u>Time</u>	<u>Well</u>	<u>Depth*</u>	<u>Time</u>	<u>Well</u>	<u>Depth*</u>
<u>0906</u>	<u>MW-4</u>	<u>80.00</u>	<u>1004</u>	<u>TWN-1</u>	<u>60.74</u>
<u>0912</u>	<u>TW4-1</u>	<u>71.30</u>	<u>0828</u>	<u>TWN-2</u>	<u>33.22</u>
<u>0901</u>	<u>TW4-2</u>	<u>74.80</u>	<u>1026</u>	<u>TWN-3</u>	<u>38.25</u>
<u>1333</u>	<u>TW4-3</u>	<u>54.96</u>	<u>1312</u>	<u>TWN-4</u>	<u>52.65</u>
<u>0918</u>	<u>TW4-4</u>	<u>70.42</u>	<u>1020</u>	<u>TWN-7</u>	<u>87.85</u>
<u>1329</u>	<u>TW4-5</u>	<u>63.00</u>	<u>1309</u>	<u>TWN-18</u>	<u>65.73 59.60</u>
<u>1340</u>	<u>TW4-6</u>	<u>70.35</u>	<u>1016</u>	<u>MW-27</u>	<u>53.56</u>
<u>1338</u>	<u>TW4-7</u>	<u>71.65</u>	<u>1439</u>	<u>MW-30</u>	<u>75.38</u>
<u>1335</u>	<u>TW4-8</u>	<u>74.30</u>	<u>1436</u>	<u>MW-31</u>	<u>68.30</u>
<u>1331</u>	<u>TW4-9</u>	<u>60.94</u>			
<u>1327</u>	<u>TW4-10</u>	<u>60.82</u>			
<u>0857</u>	<u>TW4-11</u>	<u>92.50</u>			
<u>1412</u>	<u>TW4-12</u>	<u>44.25</u>			
<u>1410</u>	<u>TW4-13</u>	<u>49.51</u>	<u>1414</u>	<u>TW4-28</u>	<u>38.56</u>
<u>1406</u>	<u>TW4-14</u>	<u>81.90</u>	<u>1404</u>	<u>TW4-29</u>	<u>72.67</u>
<u>0851</u>	<u>TW4-15</u>	<u>65.70</u>	<u>1355</u>	<u>TW4-30</u>	<u>76.30</u>
<u>1433</u>	<u>TW4-16</u>	<u>65.16</u>	<u>1353</u>	<u>TW4-31</u>	<u>81.07</u>
<u>1430</u>	<u>TW4-17</u>	<u>76.60</u>	<u>1416</u>	<u>TW4-32</u>	<u>50.09</u>
<u>1007</u>	<u>TW4-18</u>	<u>63.93</u>	<u>1349</u>	<u>TW4-33</u>	<u>71.25</u>
<u>0934</u>	<u>TW4-19</u>	<u>63.60</u>	<u>1400</u>	<u>TW4-34</u>	<u>70.56</u>
<u>0846</u>	<u>TW4-20</u>	<u>64.60</u>	<u>1357</u>	<u>TW4-35</u>	<u>74.09</u>
<u>1010</u>	<u>TW4-21</u>	<u>61.75</u>	<u>1408</u>	<u>TW4-36</u>	<u>56.68</u>
<u>0840</u>	<u>TW4-22</u>	<u>62.40</u>			
<u>1342</u>	<u>TW4-23</u>	<u>67.44</u>			
<u>0834</u>	<u>TW4-24</u>	<u>65.20</u>			
<u>0823</u>	<u>TW4-25</u>	<u>57.80</u>			
<u>1344</u>	<u>TW4-26</u>	<u>64.89</u>			
<u>1351</u>	<u>TW4-27</u>	<u>80.02</u>			

Comments: (Please note the well number for any comments)

* Depth is measured to the nearest 0.01 feet

Weekly Inspection Form

Date 3/2/15

Name Garrin Palmer / Tanner Holliday

Time	Well	Depth*	Comments	System Operational (If no note any problems/corrective actions)	
				Yes	No
1519	MW-4	82.36	Flow 4.6 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 602422.00	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1508	MW-26	89.32	Flow 11.0 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 495509.97	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1410	TW4-19	62.78	Flow 8.0 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 3127415.00	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1504	TW4-20	64.34	Flow 9.0 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 55487.71	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1528	TW4-4	70.10	Flow 10.0 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 39100.90	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1435	TWN-2	31.95	Flow 18.4 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 403708.00	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1458	TW4-22	60.00	Flow 17.4 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 204767.60	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1450	TW4-24	69.92	Flow 17.4 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 1769256.60	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1427	TW4-25	57.37	Flow 16.0 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 1072362.80	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1523	TW4-1	72.01	Flow 18.0 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 16115.40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1514	TW4-2	74.50	Flow 17.4 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 17187.50	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1511	TW4-11	92.11	Flow 18.0 GPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Meter 7781.70	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	TW4-21		Flow	<input type="checkbox"/>	<input type="checkbox"/>
			Meter	<input type="checkbox"/>	<input type="checkbox"/>

Operational Problems (Please list well number): TW4-21 not in operation.
Replaced heat lamp in TW4-2.

Corrective Action(s) Taken (Please list well number): _____

* Depth is measured to the nearest 0.01 feet.

Weekly Inspection Form

Date 3/9/15

Name Garrin Palmer, Tanner Holliday

Time	Well	Depth*	Comments	System Operational (If no note any problems/corrective actions)
1435	MW-4	76.00	Flow 4.6 GPM Meter 609279.92	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1357	MW-26	70.06	Flow 12.0 GPM Meter 497443.94	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1200	TW4-19	62.70	Flow 11.0 GPM Meter 3131990.00	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1347	TW4-20	63.90	Flow 9.2 GPM Meter 56895.04	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1450	TW4-4	70.00	Flow 11.0 GPM Meter 44797.80	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1318	TWN-2	30.26	Flow 18.0 GPM Meter 407377.60	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1332	TW4-22	59.67	Flow 17.8 GPM Meter 206584.30	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1324	TW4-24	64.80	Flow 17.9 GPM Meter 1776151.50	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1300	TW4-25	57.60	Flow 16.0 GPM Meter 1072373.98	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1442	TW4-1	81.00	Flow 18.0 GPM Meter 18278.55	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1427	TW4-2	75.20	Flow 18.0 GPM Meter 10067.70	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1405	TW4-11	94.38	Flow 18.0 Meter 8321.70	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	TW4-21		Flow Meter	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No

Operational Problems (Please list well number): TW4-21 not in operation.

Corrective Action(s) Taken (Please list well number): _____

* Depth is measured to the nearest 0.01 feet.

Weekly Inspection Form

Date 3/16/15

Name Gavin Palmer, Tanner Holliday

Time	Well	Depth*	Comments	System Operational (If no note any problems/corrective actions)
1359	MW-4	76.86	Flow 4.7 GPM Meter 6100ER.72	<input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> No
1352	MW-26	70.98	Flow 11.5 GPM Meter 499583.20	<input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> No
1448	TW4-19	62.68	Flow 12.0 GPM Meter 3136758.00	<input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> No
1349	TW4-20	63.89	Flow 9.2 GPM Meter 58253.40	<input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> No
1407	TW4-4	70.00	Flow 11.5 GPM Meter 50318.73	<input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> No
1338	TWN-2	29.00	Flow 18.5 GPM Meter 411048.70	<input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> No
1346	TW4-22	59.61	Flow 18.0 GPM Meter 208490.60	<input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> No
1342	TW4-24	79.03	Flow 15.6 GPM Meter 1781225.30	<input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> No
1335	TW4-25	57.58	Flow 16.0 GPM Meter 1072306.40	<input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> No
1405	TW4-1	72.90	Flow 17.6 GPM Meter 20175.20	<input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> No
1356	TW4-2	75.69	Flow 17.8 GPM Meter 20770.72	<input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> No
1354	TW4-11	90.85	Flow 18.0 GPM Meter 8810.20	<input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> No
	TW4-21		Flow Meter	Yes No Yes No

Operational Problems (Please list well number): TW4-21 not in operation.

Corrective Action(s) Taken (Please list well number): _____

* Depth is measured to the nearest 0.01 feet.

Weekly Inspection Form

Date 3/25/15

Name Garrin Palmer/Tanner Holliday

Time	Well	Depth*	Comments	System Operational (If no note any problems/corrective actions)
1429	MW-4	76.04	Flow 4.6 GPM Meter 624462.25	(Yes) No (Yes) No
1419	MW-26	67.50	Flow 11.6 GPM Meter 562593.08	(Yes) No (Yes) No
1515	TW4-19	63.88	Flow 8.6 GPM Meter 3142587.06	(Yes) No (Yes) No
1416	TW4-20	63.50	Flow 9.2 GPM Meter 60101.17	(Yes) No (Yes) No
1435	TW4-4	70.42	Flow 11.0 GPM Meter 57556.50	(Yes) No (Yes) No
1407	TWN-2	28.41	Flow 18.0 GPM Meter 415771.56	(Yes) No (Yes) No
1414	TW4-22	72.05	Flow 17.5 GPM Meter 210822.50	(Yes) No (Yes) No
1410	TW4-24	64.43	Flow 17.8 GPM Meter 1787654.98	(Yes) No (Yes) No
1403	TW4-25	57.45	Flow 16.0 GPM Meter 1072317.60	(Yes) No (Yes) No
1432	TW4-1	72.50	Flow 17.4 GPM Meter 22603.40	(Yes) No (Yes) No
1426	TW4-2	75.31	Flow 17.4 GPM Meter 22961.25	(Yes) No (Yes) No
1423	TW4-11	90.60	Flow 18.0 GPM Meter 9464.11	(Yes) No (Yes) No
	TW4-21		Flow Meter	Yes No Yes No

Operational Problems (Please list well number): TW4-21 not in operation.

Corrective Action(s) Taken (Please list well number): _____

* Depth is measured to the nearest 0.01 feet.

Weekly Inspection Form

Date 3/30/15

Name Garvin Palmer/Tanner Holliday

Time	Well	Depth*	Comments	System Operational (If no note any problems/corrective actions)	
				Yes	No
1439	MW-4	73.21	Flow 4.6 GPM Meter 629036.87	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1430	MW-26	72.41	Flow 11.2 GPM Meter 503495.50	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1509	TW4-19	64.48	Flow 11.0 GPM Meter 3145435.00	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1427	TW4-20	98.30	Flow 9.2 GPM Meter 611467.00	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1445	TW4-4	72.41	Flow 11.0 GPM Meter 61465.90	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1417	TWN-2	28.37	Flow 18.8 GPM Meter 418312.40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1424	TW4-22	64.92	Flow 17.8 GPM Meter 212076.30	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1421	TW4-24	64.20	Flow 17.3 GPM Meter 1791229.20	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1414	TW4-25	57.45	Flow 16.0 GPM Meter 1072439.10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1442	TW4-1	72.22	Flow 17.6 GPM Meter 24569.20	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1436	TW4-2	76.42	Flow 17.4 GPM Meter 24156.70	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1433	TW4-11	90.33	Flow 17.1 GPM Meter 9898.70	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	TW4-21		Flow	Yes	No
			Meter	Yes	No

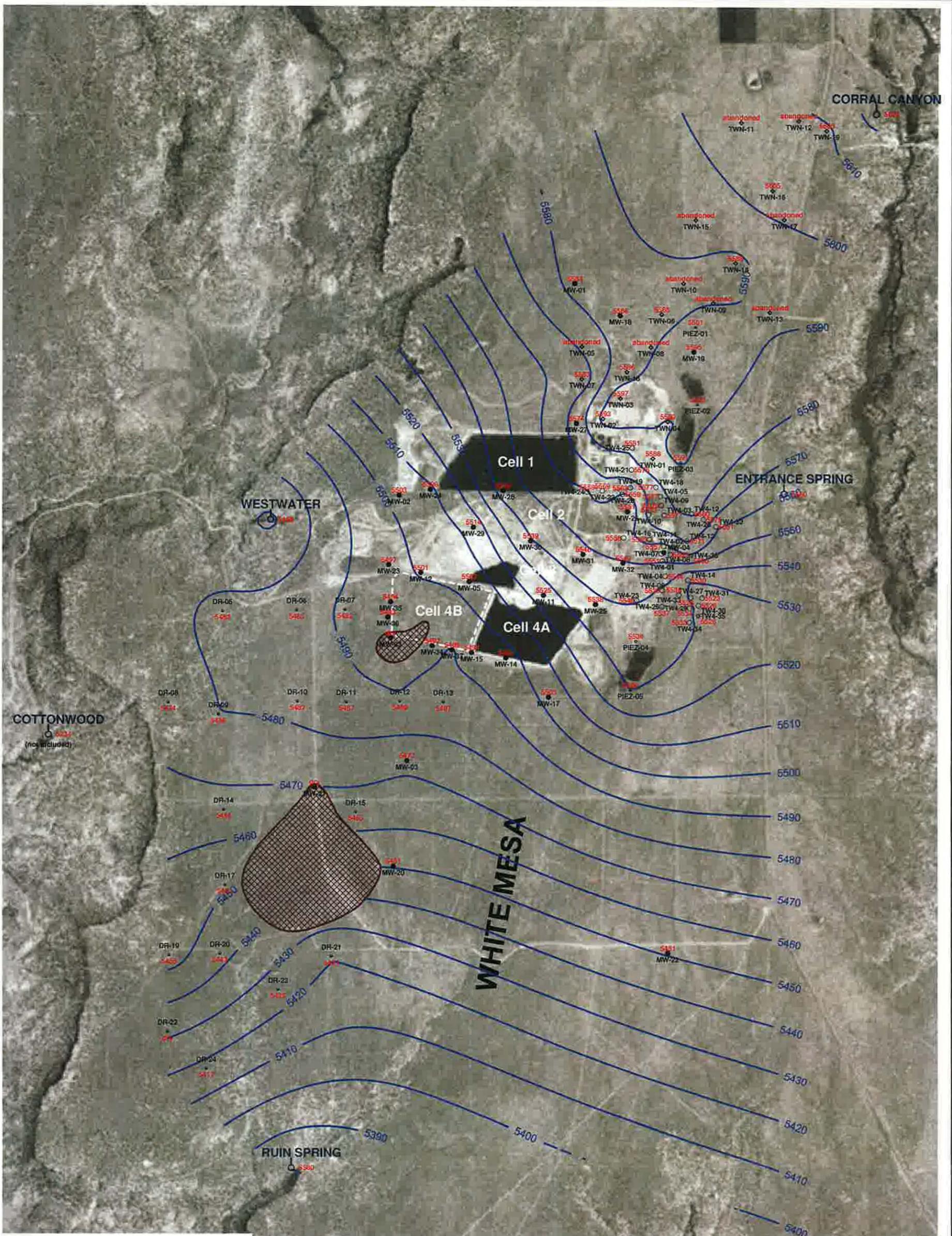
Operational Problems (Please list well number): TW4-21 not yet in operation

Corrective Action(s) Taken (Please list well number): _____

* Depth is measured to the nearest 0.01 feet.

Tab D

Kriged Previous Quarter Groundwater Contour Map



EXPLANATION

-  estimated dry area
- MW-5**
 5503 perched monitoring well showing elevation in feet amsl
- TW4-12**
 5580 temporary perched monitoring well showing elevation in feet amsl
- TWN-7**
 5563 temporary perched nitrate monitoring well showing elevation in feet amsl
- PIEZ-1**
 5591 perched piezometer showing elevation in feet amsl
- TW4-35**
 5526 temporary perched monitoring well installed May, 2014 showing elevation in feet amsl
- RUIIN SPRING**
 5380 seep or spring showing elevation in feet amsl

NOTE: MW-4, MW-26, TW4-4, TW4-19, and TW4-20 are chloroform pumping wells; TW4-22, TW4-24, TW4-25, and TWN-2 are nitrate pumping wells



**HYDRO
GEO
CHEM, INC.**

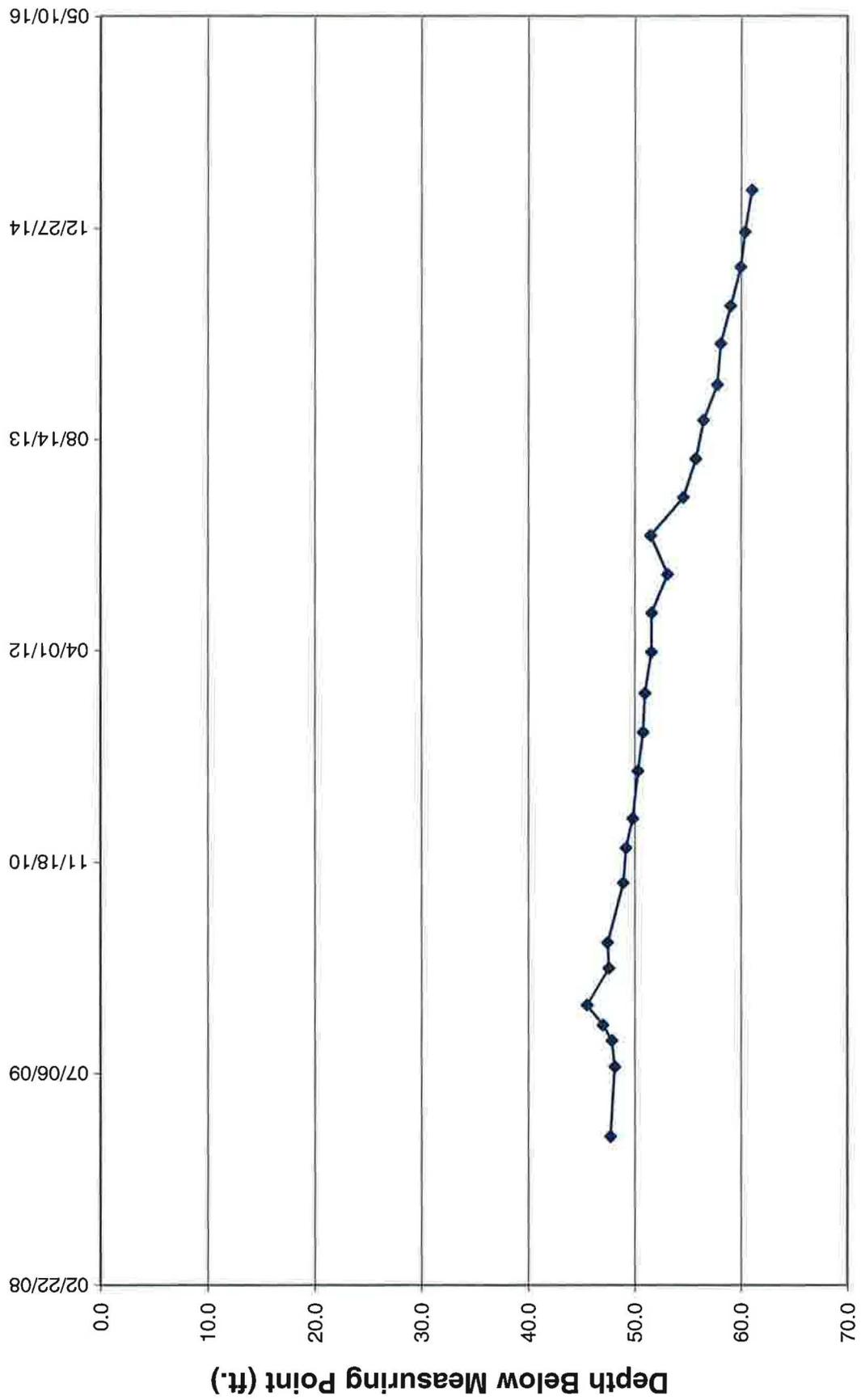
**KRIGED 4th QUARTER, 2014 WATER LEVELS
WHITE MESA SITE**

APPROVED	DATE	REFERENCE	FIGURE
		H:/718000/feb15/WL/Uwl1214.srf	D-1

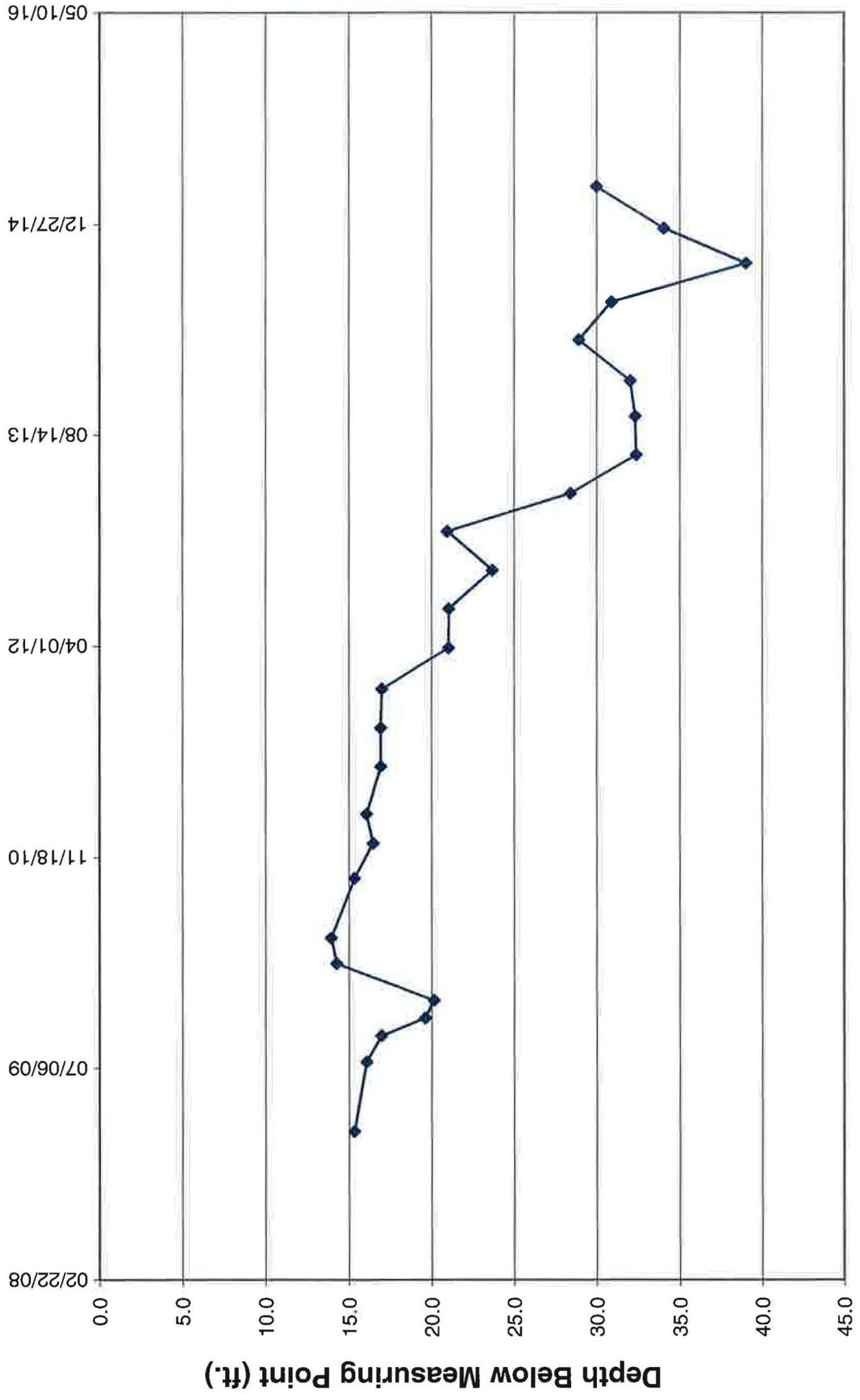
Tab E

Hydrographs of Groundwater Elevations Over Time for Nitrate Monitoring Wells

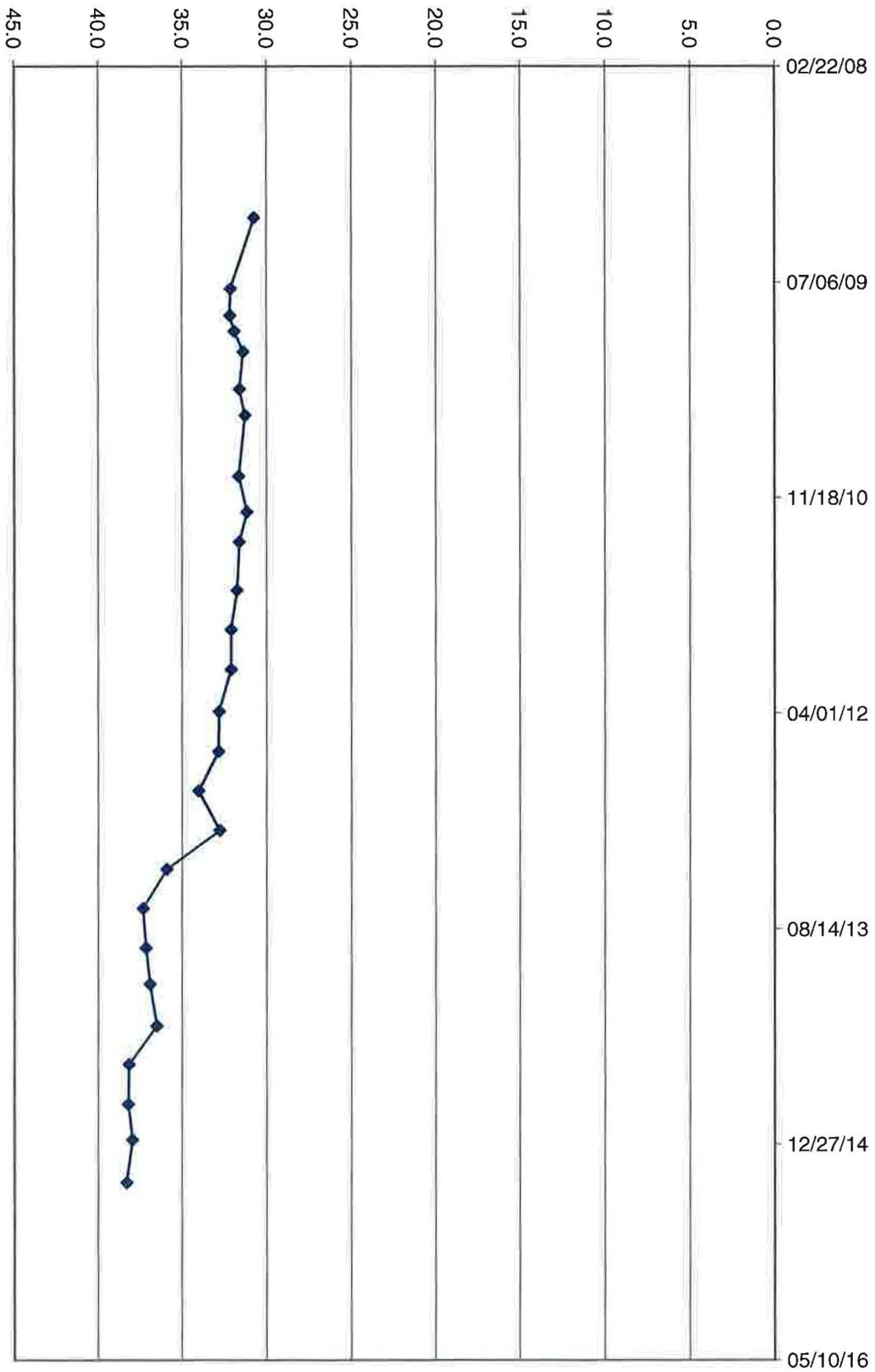
TWN-1 Water Level Over Time (ft. blimp)



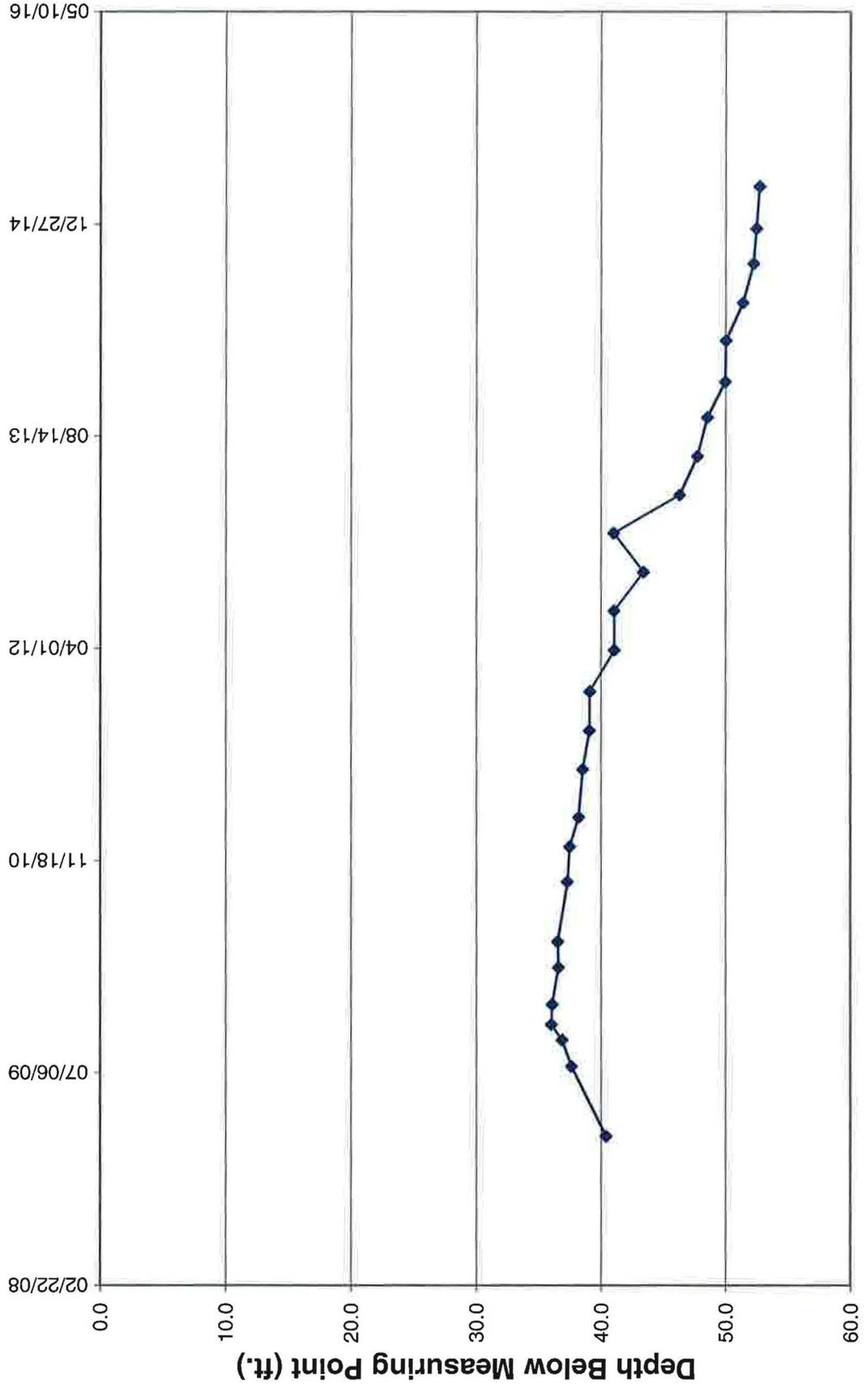
TWN-2 Water Level Over Time (ft. blmp)



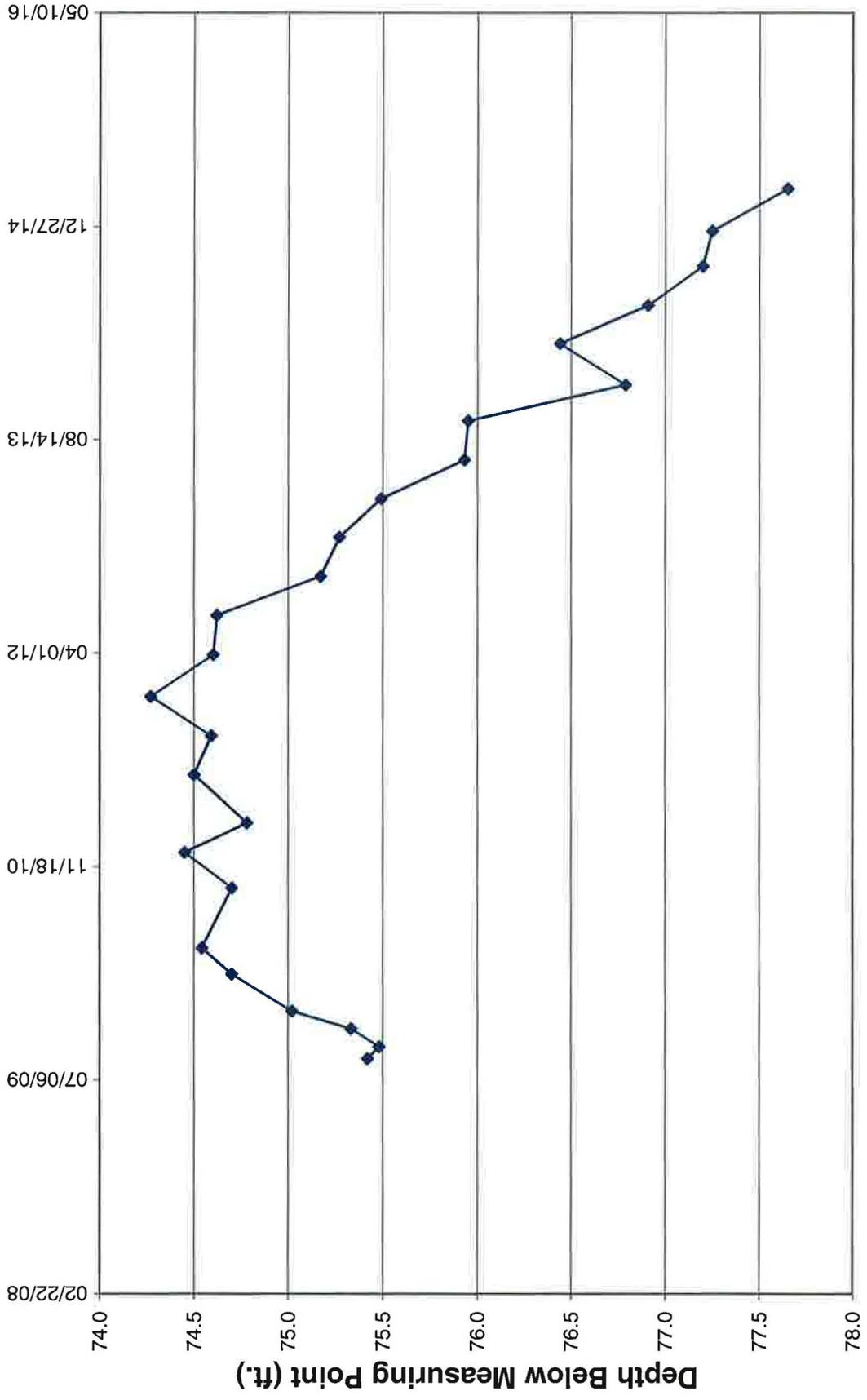
Depth Below Measuring Point (ft.)



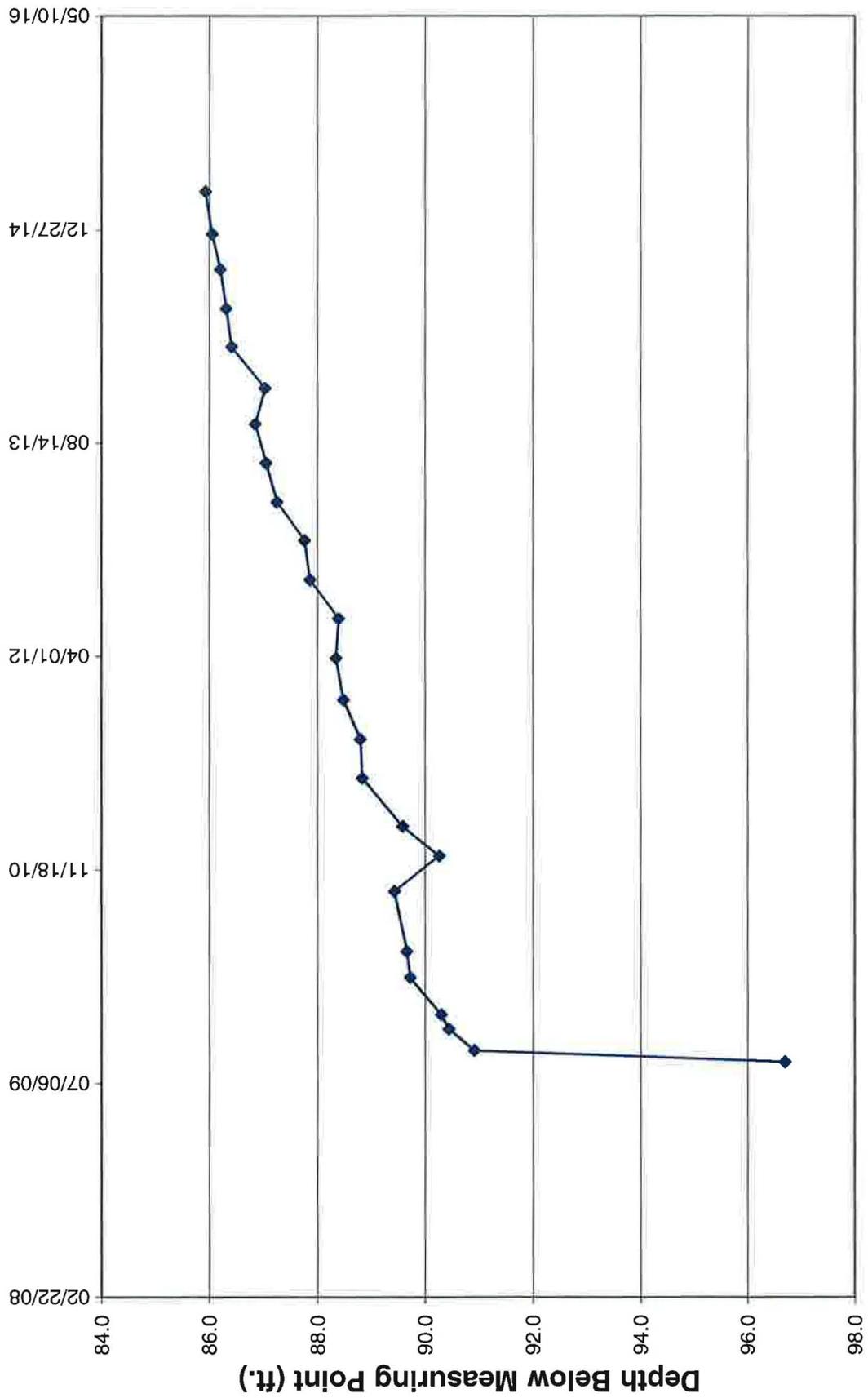
TWN-4 Water Level Over Time (ft. blimp)



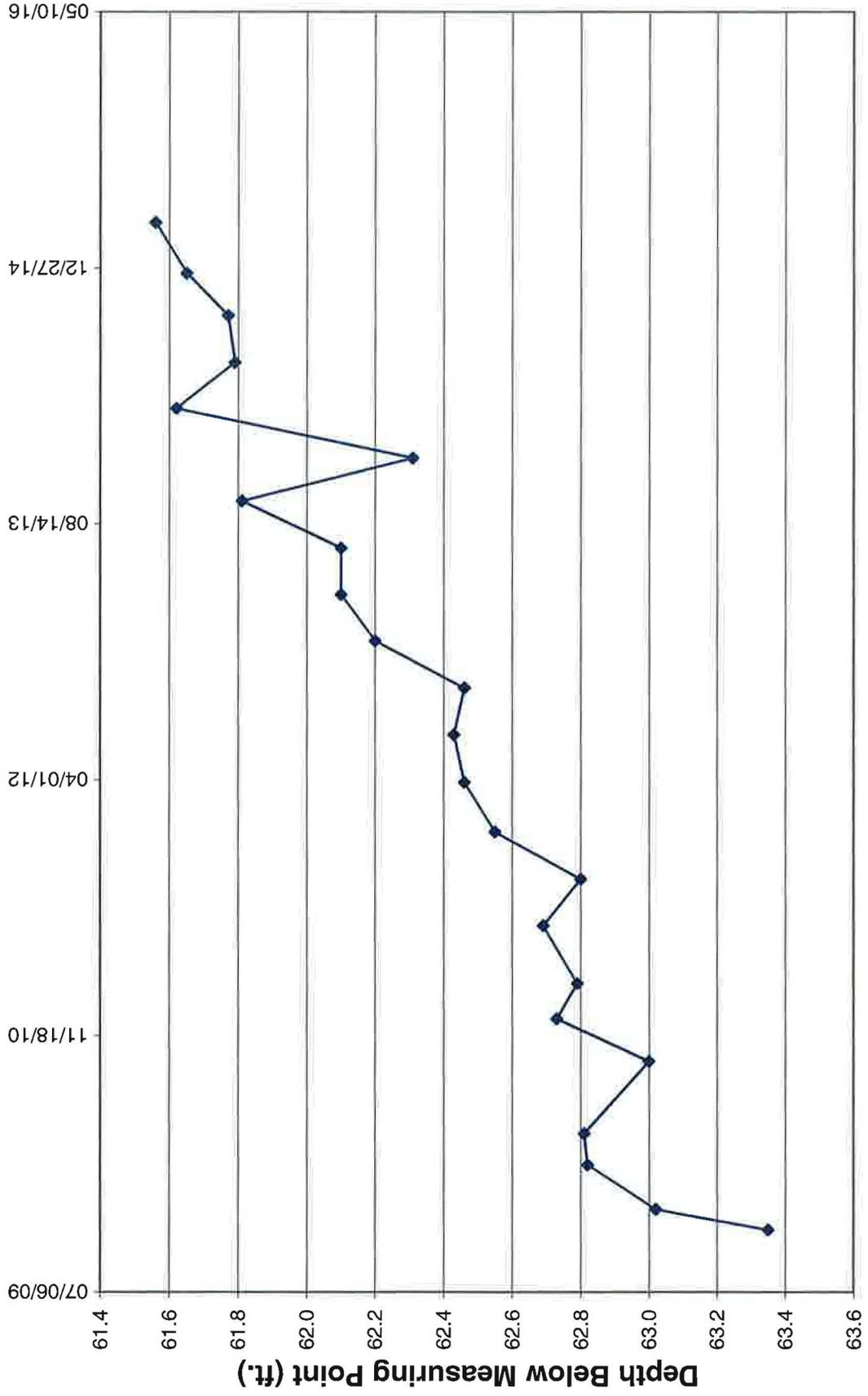
TWN-6 Water Level Over Time (ft. blmp)



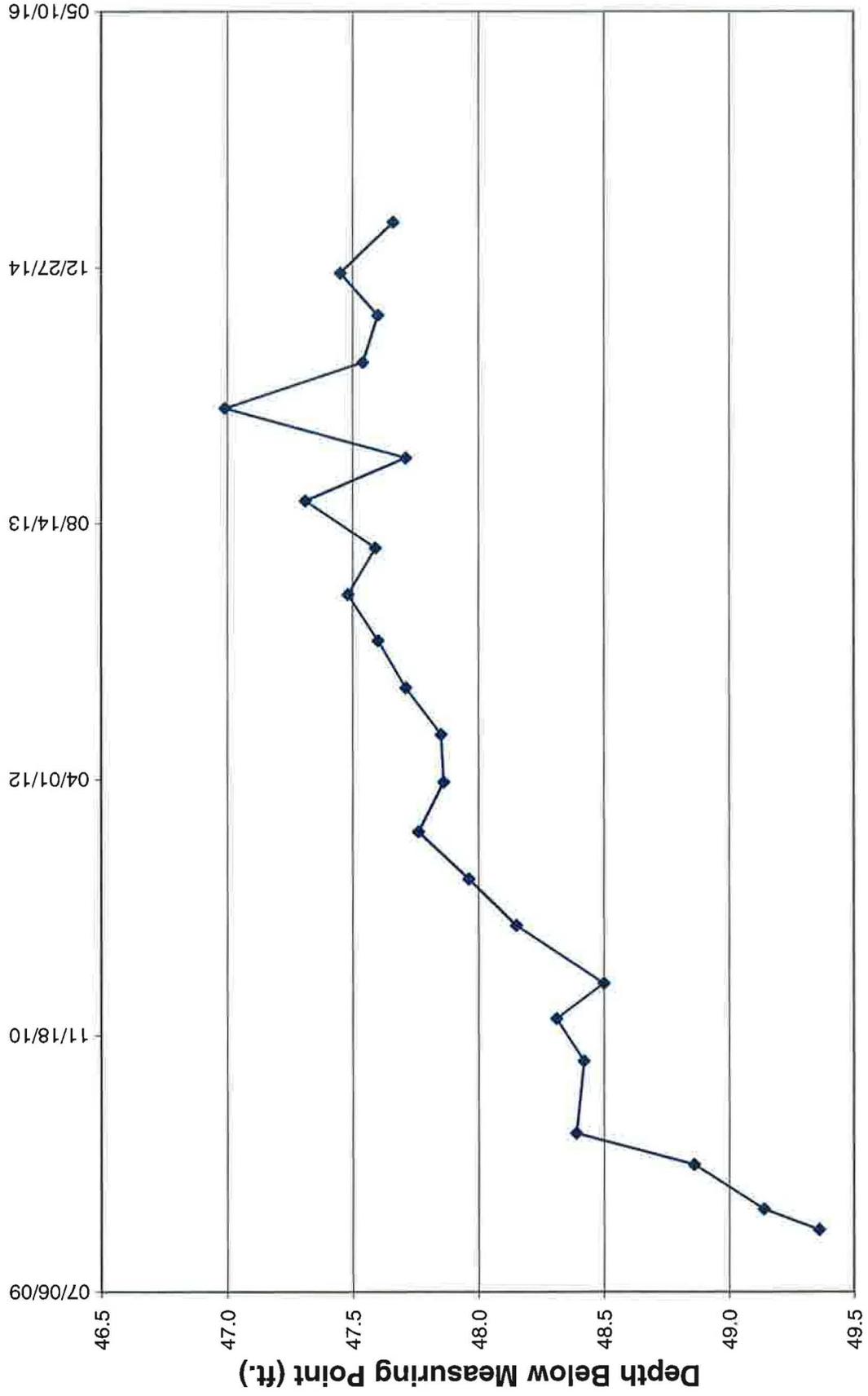
TWN-7 Water Level Over Time (ft. blmp)



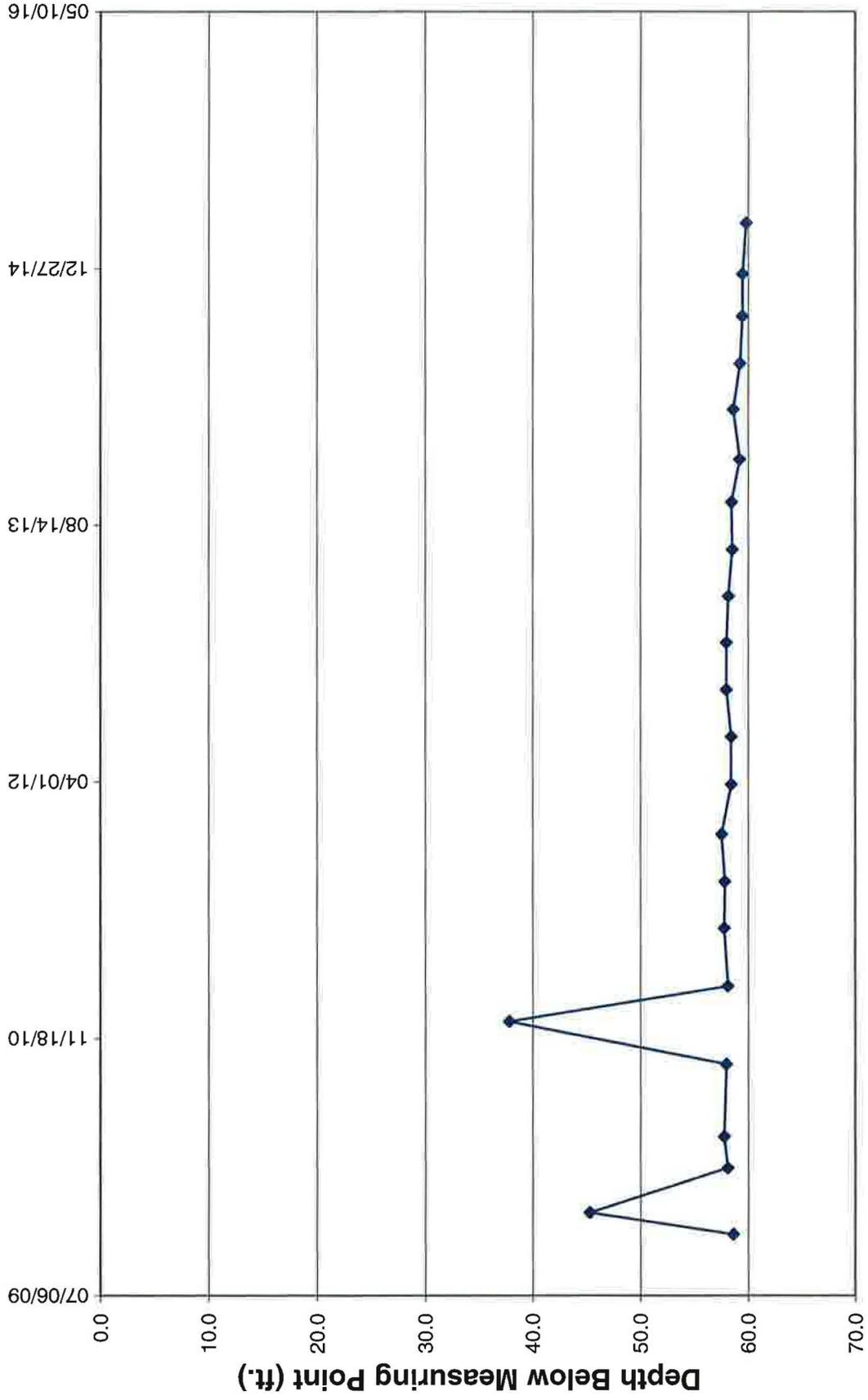
TWN-14 Water Level Over Time (ft. blmp)



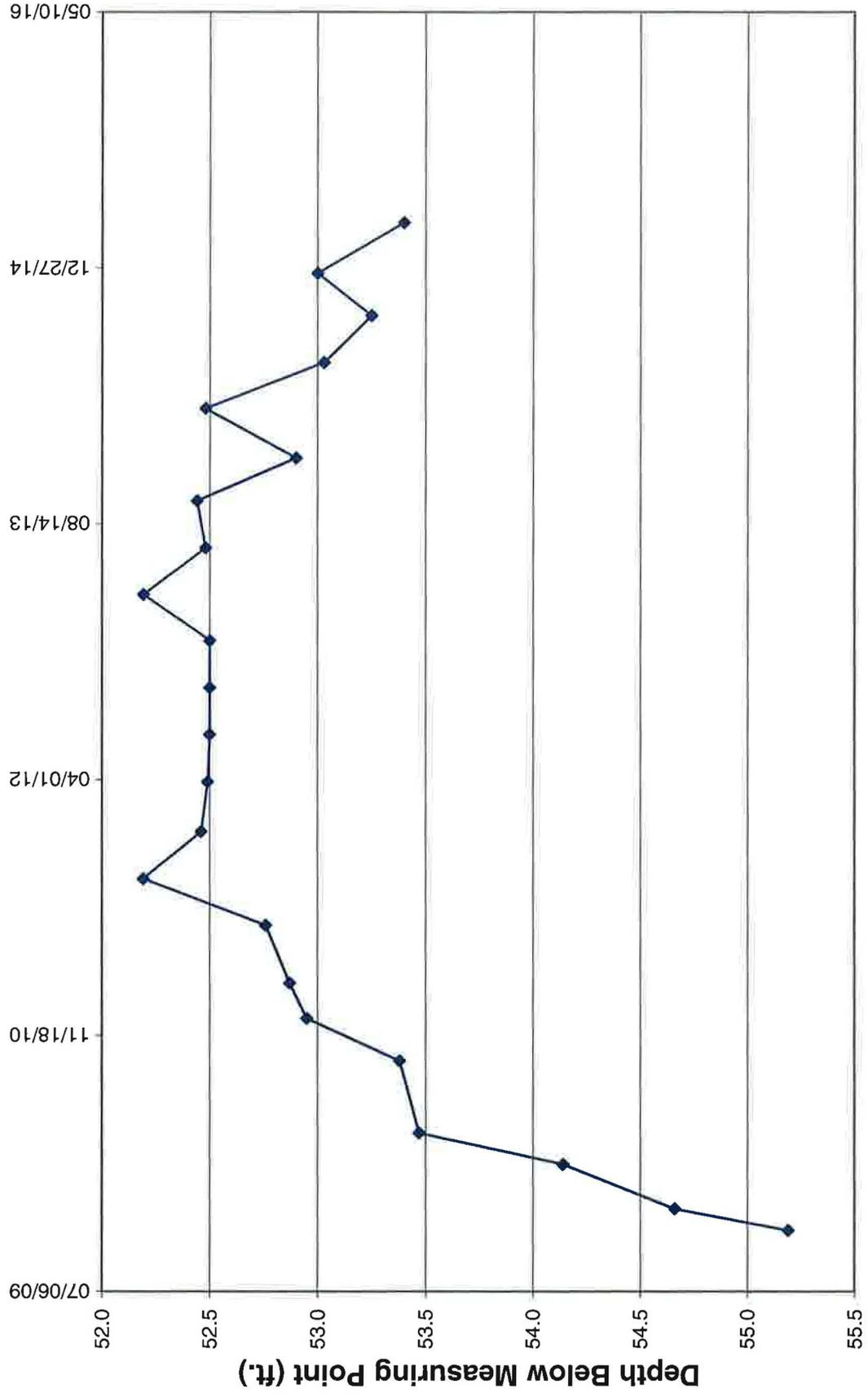
TWN-16 Water Level Over Time (ft. blmp)



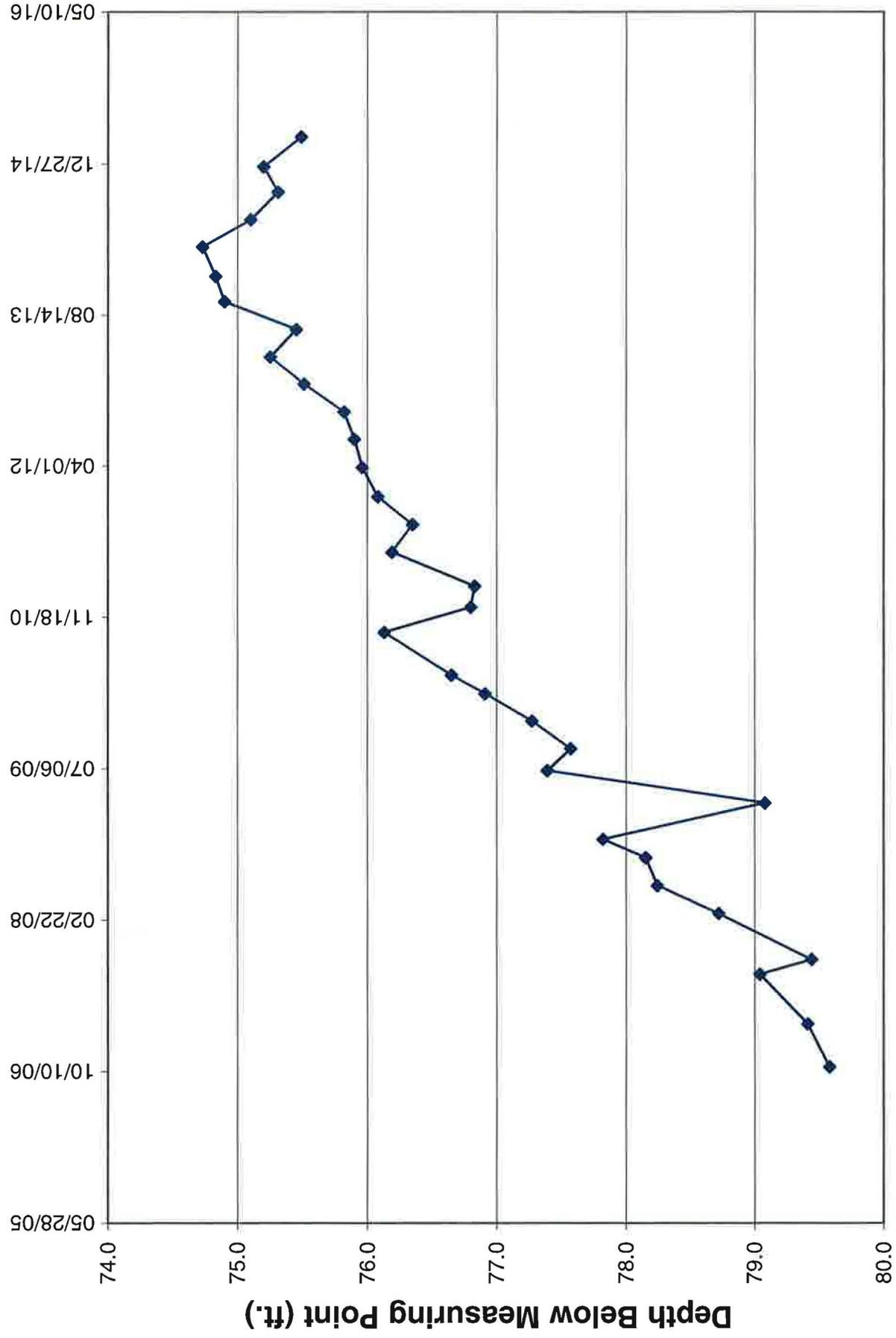
TWN-18 Water Level Over Time (ft. blimp)



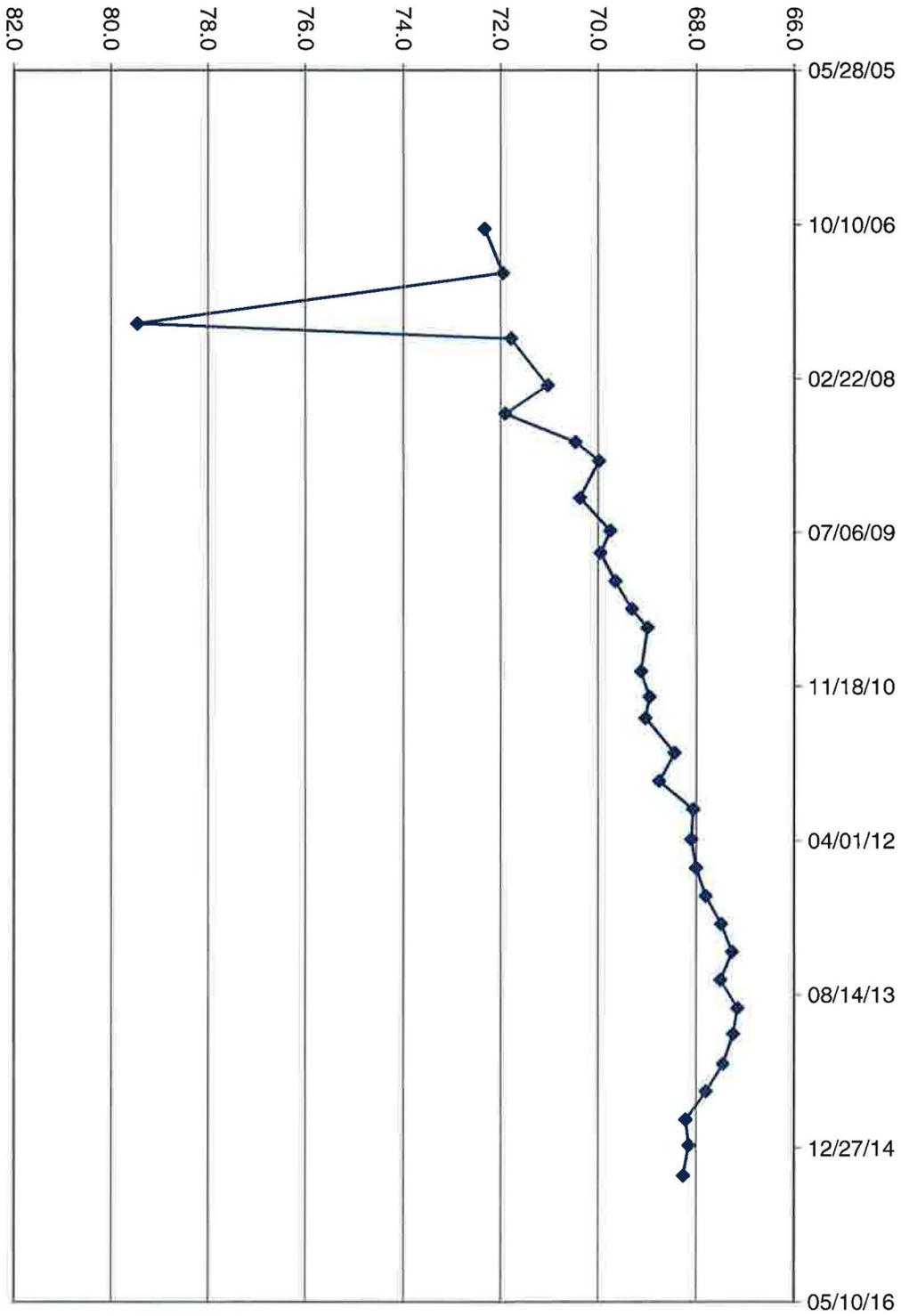
TWN-19 Water Level Over Time (ft. blimp)



MW-30 Water Level Over Time (ft. blimp)



Depth Below Measuring Point (ft.)



Tab F

Depths to Groundwater and Elevations Over Time for Nitrate Monitoring Wells

**Water Levels and Data over Time
White Mesa Mill - Well TWN-1**

Water Elevation (WL)	Land Surface (LSD)	Measuring Point Elevation (MP)	Length Of Riser (L)	Date Of Monitoring	Total or Measured Depth to Water (blw.MP)	Total Depth to Water (blw.LSD)	Total Depth Of Well
	5,646.96	5,648.09	1.13				112.5
5,600.38				02/06/09	47.71	46.58	
5,599.99				07/21/09	48.10	46.97	
5,600.26				09/21/09	47.83	46.70	
5,601.10				10/28/09	46.99	45.86	
5,602.59				12/14/09	45.50	44.37	
5,600.55				03/11/10	47.54	46.41	
5,600.66				05/11/10	47.43	46.30	
5,599.18				09/29/10	48.91	47.78	
5,598.92				12/21/10	49.17	48.04	
5,598.29				02/28/11	49.80	48.67	
5,597.80				06/21/11	50.29	49.16	
5,597.32				09/20/11	50.77	49.64	
5,597.15				12/21/11	50.94	49.81	
5,596.54				03/27/12	51.55	50.42	
5,596.52				06/28/12	51.57	50.44	
5,595.03				09/27/12	53.06	51.93	
5,596.62				12/28/12	51.47	50.34	
5,593.54				03/28/13	54.55	53.42	
5,592.38				06/27/13	55.71	54.58	
5,591.65				09/27/13	56.44	55.31	
5,590.34				12/20/13	57.75	56.62	
5,590.03				03/27/14	58.06	56.93	
5,589.09				06/25/14	59.00	57.87	
5,588.15				09/25/14	59.94	58.81	
5,587.74				12/17/14	60.35	59.22	
5,587.09				03/26/15	61.00	59.87	

Water Levels and Data over Time
White Mesa Mill - Well TWN-2

Water Elevation (WL)	Land Surface (LSD)	Measuring Point Elevation (MP)	Length Of Riser (L)	Date Of Monitoring	Total or Measured Depth to Water (blw.MP)	Total Depth to Water (blw.LSD)	Total Depth Of Well
	5,625.75	5,626.69	0.94				95
5,611.37				02/06/09	15.32	14.38	
5,610.63				07/21/09	16.06	15.12	
5,609.73				09/21/09	16.96	16.02	
5,607.08				11/02/09	19.61	18.67	
5,606.57				12/14/09	20.12	19.18	
5,612.45				03/11/10	14.24	13.30	
5,612.78				05/11/10	13.91	12.97	
5,611.37				09/29/10	15.32	14.38	
5,610.24				12/21/10	16.45	15.51	
5,610.64				02/28/11	16.05	15.11	
5,609.78				06/21/11	16.91	15.97	
5609.79				09/20/11	16.90	15.96	
5609.72				12/21/11	16.97	16.03	
5,605.69				03/27/12	21.00	20.06	
5,605.67				06/28/12	21.02	20.08	
5,603.03				09/27/12	23.66	22.72	
5,605.76				12/28/12	20.93	19.99	
5,598.28				03/28/13	28.41	27.47	
5,594.32				06/27/13	32.37	31.43	
5,594.38				09/27/13	32.31	31.37	
5,594.68				12/20/13	32.01	31.07	
5,597.79				03/27/14	28.90	27.96	
5,595.80				06/25/14	30.89	29.95	
5,587.67				09/25/14	39.02	38.08	
5,592.66				12/17/14	34.03	33.09	
5,596.71				03/26/15	29.98	29.04	

Water Levels and Data over Time
White Mesa Mill - Well TWN-3

Water Elevation (WL)	Land Surface (LSD)	Measuring Point Elevation (MP)	Length Of Riser (L)	Date Of Monitoring	Total or Measured Depth to Water (blw.MP)	Total Depth to Water (blw.LSD)	Total Depth Of Well
	5,633.64	5,634.50	0.86				110
5,603.77				02/06/09	30.73	29.87	
5,602.37				07/21/09	32.13	31.27	
5,602.34				09/21/09	32.16	31.30	
5,602.60				10/28/09	31.90	31.04	
5,603.12				12/14/09	31.38	30.52	
5,602.90				03/11/10	31.60	30.74	
5,603.23				05/11/10	31.27	30.41	
5,602.86				09/29/10	31.64	30.78	
5,603.35				12/21/10	31.15	30.29	
5,602.89				02/28/11	31.61	30.75	
5,602.75				06/21/11	31.75	30.89	
5,602.40				09/20/11	32.10	31.24	
5,602.40				12/21/11	32.10	31.24	
5,601.70				03/27/12	32.80	31.94	
5,601.67				06/28/12	32.83	31.97	
5,600.50				09/27/12	34.00	33.14	
5,601.74				12/28/12	32.76	31.90	
5,598.60				03/28/13	35.90	35.04	
5,597.18				06/27/13	37.32	36.46	
5,597.36				09/27/13	37.14	36.28	
5,597.60				12/20/13	36.90	36.04	
5,598.00				03/27/14	36.50	35.64	
5,596.34				06/25/14	38.16	37.30	
5,596.30				09/25/14	38.20	37.34	
5,596.55				12/17/14	37.95	37.09	
5,596.20				03/26/15	38.30	37.44	

Water Levels and Data over Time
White Mesa Mill - Well TWN-4

Water Elevation (WL)	Land Surface (LSD)	Measuring Point Elevation (MP)	Length Of Riser (L)	Date Of Monitoring	Total or Measured Depth to Water (blw.MP)	Total Depth to Water (blw.LSD)	Total Depth Of Well
	5,641.04	5,641.87	0.83				136
5,601.47				02/06/09	40.40	39.57	
5,604.26				07/21/09	37.61	36.78	
5,605.02				09/21/09	36.85	36.02	
5,605.87				10/28/09	36.00	35.17	
5,605.81				12/14/09	36.06	35.23	
5,605.31				03/11/10	36.56	35.73	
5,605.36				05/11/10	36.51	35.68	
5,604.59				09/29/10	37.28	36.45	
5,604.42				12/21/10	37.45	36.62	
5,603.69				02/28/11	38.18	37.35	
5,603.36				06/21/11	38.51	37.68	
5,602.82				09/20/11	39.05	38.22	
5,602.79				12/21/11	39.08	38.25	
5,600.82				03/27/12	41.05	40.22	
5,600.84				06/28/12	41.03	40.20	
5,598.47				09/27/12	43.40	42.57	
5,600.86				12/28/12	41.01	40.18	
5,595.57				03/28/13	46.30	45.47	
5,594.12				06/27/13	47.75	46.92	
5,593.33				09/27/13	48.54	47.71	
5,591.92				12/20/13	49.95	49.12	
5,591.85				03/27/14	50.02	49.19	
5,590.49				06/25/14	51.38	50.55	
5,589.64				09/25/14	52.23	51.40	
5,589.42				12/17/14	52.45	51.62	
5,589.17				03/26/15	52.70	51.87	

**Water Levels and Data over Time
White Mesa Mill - Well TWN-6**

Water Elevation (WL)	Land Surface (LSD)	Measuring Point Elevation (MP)	Length Of Riser (L)	Date Of Monitoring	Total or Measured Depth to Water (blw.MP)	Total Depth to Water (blw.LSD)	Total Depth Of Well
	5,663.03	5,664.94	1.91				135
5,589.52				08/25/09	75.42	73.51	
5,589.46				09/22/09	75.48	73.57	
5,589.61				11/03/09	75.33	73.42	
5,589.92				12/14/09	75.02	73.11	
5,590.24				03/11/10	74.70	72.79	
5,590.40				05/11/10	74.54	72.63	
5,590.24				09/29/10	74.70	72.79	
5,590.49				12/21/10	74.45	72.54	
5,590.16				02/28/11	74.78	72.87	
5,590.44				06/21/11	74.50	72.59	
5,590.35				09/20/11	74.59	72.68	
5,590.67				12/21/11	74.27	72.36	
5,590.34				03/27/12	74.60	72.69	
5,590.32				06/28/12	74.62	72.71	
5,589.77				09/27/12	75.17	73.26	
5,589.67				12/28/12	75.27	73.36	
5,589.45				03/28/13	75.49	73.58	
5,589.01				06/27/13	75.93	74.02	
5,588.99				09/27/13	75.95	74.04	
5,588.15				12/20/13	76.79	74.88	
5,588.50				03/27/14	76.44	74.53	
5,588.03				06/25/14	76.91	75.00	
5,587.74				09/25/14	77.20	75.29	
5,587.69				12/17/14	77.25	75.34	
5,587.29				03/26/15	77.65	75.74	

Water Levels and Data over Time
White Mesa Mill - Well TWN-7

Water Elevation (WL)	Land Surface (LSD)	Measuring Point Elevation (MP)	Length Of Riser (L)	Date Of Monitoring	Total or Measured Depth to Water (blw.MP)	Total Depth to Water (blw.LSD)	Total Depth Of Well
	5,647.39	5,649.26	1.87				120
5,552.56				08/25/09	96.70	94.83	
5,558.34				09/21/09	90.92	89.05	
5,558.82				11/10/09	90.44	88.57	
5,558.96				12/14/09	90.30	88.43	
5,559.54				03/11/10	89.72	87.85	
5,559.60				05/11/10	89.66	87.79	
5,559.83				09/29/10	89.43	87.56	
5,559.00				12/21/10	90.26	88.39	
5,559.68				02/28/11	89.58	87.71	
5,560.43				06/21/11	88.83	86.96	
5,560.46				09/20/11	88.80	86.93	
5,560.78				12/21/11	88.48	86.61	
5,560.92				03/27/12	88.34	86.47	
5,560.87				06/28/12	88.39	86.52	
5,561.40				09/27/12	87.86	85.99	
5,561.50				12/28/12	87.76	85.89	
5,562.01				03/28/13	87.25	85.38	
5,562.21				06/27/13	87.05	85.18	
5,562.41				09/27/13	86.85	84.98	
5,562.23				12/20/13	87.03	85.16	
5,562.85				03/27/14	86.41	84.54	
5,562.95				06/25/14	86.31	84.44	
5,563.06				09/25/14	86.20	84.33	
5,563.21				12/17/14	86.05	84.18	
5,563.33				03/26/15	85.93	84.06	

Water Levels and Data over Time
White Mesa Mill - Well TWN-14

Water Elevation (WL)	Land Surface (LSD)	Measuring Point Elevation (MP)	Length Of Riser (L)	Date Of Monitoring	Total or Measured Depth to Water (blw.MP)	Total Depth to Water (blw.LSD)	Total Depth Of Well
	5,647.80	5,649.53	1.73				135
5,586.18				11/04/09	63.35	61.62	
5,586.51				12/14/09	63.02	61.29	
5,586.71				03/11/10	62.82	61.09	
5,586.72				05/11/10	62.81	61.08	
5,586.53				09/29/10	63.00	61.27	
5,586.80				12/21/10	62.73	61.00	
5,586.74				02/28/11	62.79	61.06	
5,586.84				06/21/11	62.69	60.96	
5,586.73				09/20/11	62.80	61.07	
5,586.98				12/21/11	62.55	60.82	
5,587.07				03/27/12	62.46	60.73	
5,587.10				06/28/12	62.43	60.70	
5,587.07				09/27/12	62.46	60.73	
5,587.33				12/28/12	62.20	60.47	
5,587.43				03/28/13	62.10	60.37	
5,587.43				06/27/13	62.10	60.37	
5,587.72				09/27/13	61.81	60.08	
5,587.22				12/20/13	62.31	60.58	
5,587.91				03/27/14	61.62	59.89	
5,587.74				06/25/14	61.79	60.06	
5,587.76				09/25/14	61.77	60.04	
5,587.88				12/17/14	61.65	59.92	
5,587.97				03/26/15	61.56	59.83	

Water Levels and Data over Time
White Mesa Mill - Well TWN-16

Water Elevation (WL)	Land Surface (LSD)	Measuring Point Elevation (MP)	Length Of Riser (L)	Date Of Monitoring	Total or Measured Depth to Water (blw.MP)	Total Depth to Water (blw.LSD)	Total Depth Of Well
	5,651.07	5,652.70	1.63				100
5,603.34				11/04/09	49.36	47.73	
5,603.56				12/14/09	49.14	47.51	
5,603.84				03/11/10	48.86	47.23	
5,604.31				05/11/10	48.39	46.76	
5,604.28				09/29/10	48.42	46.79	
5,604.39				12/21/10	48.31	46.68	
5,604.20				02/28/11	48.50	46.87	
5,604.55				06/21/11	48.15	46.52	
5,604.74				09/20/11	47.96	46.33	
5,604.94				12/21/11	47.76	46.13	
5,604.84				03/27/12	47.86	46.23	
5,604.85				06/28/12	47.85	46.22	
5,604.99				09/27/12	47.71	46.08	
5,605.10				12/28/12	47.60	45.97	
5,605.22				03/28/13	47.48	45.85	
5,605.11				06/27/13	47.59	45.96	
5,605.39				09/27/13	47.31	45.68	
5,604.99				12/20/13	47.71	46.08	
5,605.71				03/27/14	46.99	45.36	
5,605.16				06/25/14	47.54	45.91	
5,605.10				09/25/14	47.60	45.97	
5,605.25				12/17/14	47.45	45.82	
5,605.04				03/26/15	47.66	46.03	

**Water Levels and Data over Time
White Mesa Mill - Well TWN -18**

Water Elevation (WL)	Land Surface (LSD)	Measuring Point Elevation (MP)	Length Of Riser (L)	Date Of Monitoring	Total or Measured Depth to Water (blw.MP)	Total Depth to Water (blw.LSD)	Total Depth Of Well
	5,643.95	5,645.45	1.50				100
5,586.85				11/02/09	58.60	57.10	
5,600.14				12/14/09	45.31	43.81	
5,587.36				03/11/10	58.09	56.59	
5,587.71				05/11/10	57.74	56.24	
5,587.50				09/29/10	57.95	56.45	
5,607.66				12/21/10	37.79	36.29	
5,587.35				02/28/11	58.10	56.60	
5,587.71				06/21/11	57.74	56.24	
5,587.65				09/20/11	57.80	56.30	
5,587.95				12/21/11	57.50	56.00	
5,587.05				03/27/12	58.40	56.90	
5,587.05				06/28/12	58.40	56.90	
5,587.50				09/27/12	57.95	56.45	
5,587.50				12/28/12	57.95	56.45	
5,587.32				03/28/13	58.13	56.63	
5,586.95				06/27/13	58.50	57.00	
5,587.02				09/27/13	58.43	56.93	
5,586.26				12/20/13	59.19	57.69	
5,586.87				03/27/14	58.58	57.08	
5,586.23				06/25/14	59.22	57.72	
5,586.02				09/25/14	59.43	57.93	
5,585.99				12/17/14	59.46	57.96	
5,585.66				03/26/15	59.79	58.29	

Water Levels and Data over Time
White Mesa Mill - Well TWN-19

Water Elevation (WL)	Land Surface (LSD)	Measuring Point Elevation (MP)	Length Of Riser (L)	Date Of Monitoring	Total or Measured Depth to Water (blw.MP)	Total Depth to Water (blw.LSD)	Total Depth Of Well
	5,659.59	5,661.36	1.77				110
5,606.17				11/02/09	55.19	53.42	
5,606.70				12/14/09	54.66	52.89	
5,607.22				03/11/10	54.14	52.37	
5,607.89				05/11/10	53.47	51.70	
5,607.98				09/29/10	53.38	51.61	
5,608.41				12/21/10	52.95	51.18	
5,608.49				02/28/11	52.87	51.10	
5,608.60				06/21/11	52.76	50.99	
5,609.17				09/20/11	52.19	50.42	
5,608.90				12/21/11	52.46	50.69	
5,608.87				03/27/12	52.49	50.72	
5,608.86				06/28/12	52.50	50.73	
5,608.86				09/27/12	52.50	50.73	
5,608.86				12/28/12	52.50	50.73	
5,609.17				03/28/13	52.19	50.42	
5,608.88				06/27/13	52.48	50.71	
5,608.92				09/27/13	52.44	50.67	
5,608.46				12/20/13	52.90	51.13	
5,608.88				03/27/14	52.48	50.71	
5,608.33				06/25/14	53.03	51.26	
5,608.11				09/25/14	53.25	51.48	
5,608.36				12/17/14	53.00	51.23	
5,607.96				03/26/15	53.40	51.63	

Water Levels and Data over Time
White Mesa Mill - Well MW-30

Water Elevation (WL)	Land Surface (LSD)	Measuring Point Elevation (MP)	Length Of Riser (L)	Date Of Monitoring	Total or Measured Depth to Water (blw.MP)	Total Depth to Water (blw.LSD)	Total Depth Of Well
	5,613.34	5,614.50	1.16				110
5,534.92				10/24/2006	79.58	78.42	
5,535.09				3/16/2007	79.41	78.25	
5,535.46				8/27/2007	79.04	77.88	
5,535.06				10/15/2007	79.44	78.28	
5,535.78				3/15/2008	78.72	77.56	
5,536.26				6/15/2008	78.24	77.08	
5,536.35				9/15/2008	78.15	76.99	
5,536.68				11/15/2008	77.82	76.66	
5,535.42				3/15/2009	79.08	77.92	
5,537.11				6/30/2009	77.39	76.23	
5,536.93				9/10/2009	77.57	76.41	
5,537.23				12/11/2009	77.27	76.11	
5,537.59				3/11/2010	76.91	75.75	
5,537.85				5/11/2010	76.65	75.49	
5,538.37				9/29/2010	76.13	74.97	
5537.70				12/21/2010	76.8	75.64	
5537.67				2/28/2011	76.83	75.67	
5538.31				6/21/2011	76.19	75.03	
5538.15				9/20/2011	76.35	75.19	
5538.42				12/21/2011	76.08	74.92	
5538.54				3/27/2012	75.96	74.8	
5538.60				6/28/2012	75.9	74.74	
5538.68				9/27/2012	75.82	74.66	
5538.99				12/28/2012	75.51	74.35	
5539.25				3/28/2013	75.25	74.09	
5539.05				6/27/2013	75.45	74.29	
5539.60				9/27/2013	74.90	73.74	
5539.67				12/20/2013	74.83	73.67	
5539.77				3/27/2014	74.73	73.57	
5539.40				6/25/2014	75.10	73.94	
5539.19				9/25/2014	75.31	74.15	
5539.30				12/17/2014	75.20	74.04	
5539.01				3/26/2015	75.49	74.33	

**Water Levels and Data over Time
White Mesa Mill - Well MW-31**

Water Elevation (WL)	Land Surface (LSD)	Measuring Point Elevation (MP)	Length Of Riser (L)	Date Of Monitoring	Total or Measured Depth to Water (blw.MP)	Total Depth to Water (blw.LSD)	Total Depth Of Well
	5,615.26	5,616.40	1.14				130
5,544.07				10/24/2006	72.33	71.19	
5,544.45				3/16/2007	71.95	70.81	
5,536.94				8/27/2007	79.46	78.32	
5,544.62				10/15/2007	71.78	70.64	
5,545.37				3/15/2008	71.03	69.89	
5,544.50				6/15/2008	71.90	70.76	
5,545.94				9/15/2008	70.46	69.32	
5,546.42				11/15/2008	69.98	68.84	
5,546.03				3/15/2009	70.37	69.23	
5,546.65				6/30/2009	69.75	68.61	
5,546.45				9/10/2009	69.95	68.81	
5,546.75				12/11/2009	69.65	68.51	
5,547.09				3/11/2010	69.31	68.17	
5,547.41				5/11/2010	68.99	67.85	
5,547.28				9/29/2010	69.12	67.98	
5547.45				12/21/2010	68.95	67.81	
5547.37				2/28/2011	69.03	67.89	
5547.96				6/21/2011	68.44	67.3	
5547.65				9/20/2011	68.75	67.61	
5548.34				12/21/2011	68.06	66.92	
5548.30				3/27/2012	68.10	66.96	
5548.40				6/28/2012	68.00	66.86	
5548.59				9/27/2012	67.81	66.67	
5548.91				12/28/2012	67.49	66.35	
5549.14				3/28/2013	67.26	66.12	
5548.90				6/27/2013	67.50	66.36	
5549.25				9/27/2013	67.15	66.01	
5549.16				12/20/2013	67.24	66.10	
5548.95				3/27/2014	67.45	66.31	
5548.60				6/25/2014	67.80	66.66	
5548.19				9/25/2014	68.21	67.07	
5548.25				12/17/2014	68.15	67.01	
5548.14				3/26/2015	68.26	67.12	

Tab G

Laboratory Analytical Reports



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Nitrate 2015
Lab Sample ID: 1502347-009
Client Sample ID: Piez-01_02182015
Collection Date: 2/18/2015 857h
Received Date: 2/20/2015 1045h

Analytical Results

3440 South 700 West
Salt Lake City, UT 84119

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chloride	mg/L		2/25/2015 1853h	E300.0	10.0	55.9	
Nitrate/Nitrite (as N)	mg/L		3/4/2015 1415h	E353.2	0.100	6.41	

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Laboratory Director

Jose Rocha
QA Officer



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Nitrate 2015
Lab Sample ID: 1502347-010
Client Sample ID: Piez-02_02182015
Collection Date: 2/18/2015 835h
Received Date: 2/20/2015 1045h

Analytical Results

3440 South 700 West
Salt Lake City, UT 84119

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chloride	mg/L		2/25/2015 1910h	E300.0	10.0	12.6	
Nitrate/Nitrite (as N)	mg/L		3/4/2015 1416h	E353.2	0.0100	0.749	

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Laboratory Director

Jose Rocha
QA Officer



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Nitrate 2015
Lab Sample ID: 1502347-011
Client Sample ID: Piez-03_02182015
Collection Date: 2/18/2015 845h
Received Date: 2/20/2015 1045h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chloride	mg/L		2/25/2015 2000h	E300.0	10.0	27.1	
Nitrate/Nitrite (as N)	mg/L		3/4/2015 1417h	E353.2	0.0100	1.82	*

* - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.

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INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.

Contact: Garrin Palmer

Project: 1st Quarter Nitrate 2015

Lab Sample ID: 1502347-003

Client Sample ID: TWN-01_02182015

Collection Date: 2/18/2015 1325h

Received Date: 2/20/2015 1045h

Analytical Results

3440 South 700 West
Salt Lake City, UT 84119

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chloride	mg/L		2/25/2015 1745h	E300.0	10.0	27.8	
Nitrate/Nitrite (as N)	mg/L		3/4/2015 1357h	E353.2	0.0100	1.37	

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INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Nitrate 2015
Lab Sample ID: 1502347-006
Client Sample ID: TWN-02_02182015
Collection Date: 2/18/2015 825h
Received Date: 2/20/2015 1045h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chloride	mg/L		2/25/2015 1819h	E300.0	10.0	84.8	
Nitrate/Nitrite (as N)	mg/L		3/4/2015 1401h	E353.2	1.00	48.6	

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INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Nitrate 2015
Lab Sample ID: 1502347-005
Client Sample ID: TWN-03_02192015
Collection Date: 2/19/2015 745h
Received Date: 2/20/2015 1045h

Analytical Results

3440 South 700 West
Salt Lake City, UT 84119

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chloride	mg/L		2/25/2015 1638h	E300.0	100	164	
Nitrate/Nitrite (as N)	mg/L		3/4/2015 1400h	E353.2	0.100	19.4	

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INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Nitrate 2015
Lab Sample ID: 1502347-002
Client Sample ID: TWN-04_02182015
Collection Date: 2/18/2015 1256h
Received Date: 2/20/2015 1045h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chloride	mg/L		2/25/2015 1729h	E300.0	10.0	31.5	
Nitrate/Nitrite (as N)	mg/L		3/4/2015 1356h	E353.2	0.0100	1.48	

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INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Nitrate 2015
Lab Sample ID: 1502347-001
Client Sample ID: TWN-07_02192015
Collection Date: 2/19/2015 735h
Received Date: 2/20/2015 1045h

Analytical Results

3440 South 700 West
Salt Lake City, UT 84119

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chloride	mg/L		2/25/2015 2108h	E300.0	1.00	5.58	
Nitrate/Nitrite (as N)	mg/L		3/4/2015 1343h	E353.2	0.0100	1.04	'@

@ - High RPD due to suspected sample non-homogeneity or matrix interference.

¹ - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.

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INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Nitrate 2015
Lab Sample ID: 1502347-012
Client Sample ID: TWN-07R_02182015
Collection Date: 2/18/2015 1157h
Received Date: 2/20/2015 1045h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chloride	mg/L		2/25/2015 2141h	E300.0	1.00	< 1.00	
Nitrate/Nitrite (as N)	mg/L		3/4/2015 1421h	E353.2	0.100	< 0.100	

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INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Nitrate 2015
Lab Sample ID: 1502347-004
Client Sample ID: TWN-18_02182015
Collection Date: 2/18/2015 1401h
Received Date: 2/20/2015 1045h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chloride	mg/L		2/25/2015 1802h	E300.0	10.0	73.3	
Nitrate/Nitrite (as N)	mg/L		3/4/2015 1358h	E353.2	0.0100	1.00	

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INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.

Contact: Garrin Palmer

Project: 1st Quarter Chloroform 2015

Lab Sample ID: 1503226-033

Client Sample ID: TW4-22_03092015

Collection Date: 3/9/2015 1336h

Received Date: 3/13/2015 1015h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chloride	mg/L		3/17/2015 2054h	E300.0	100	675	
Nitrate/Nitrite (as N)	mg/L		3/20/2015 1751h	E353.2	10.0	69.2	

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INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Chloroform 2015
Lab Sample ID: 1503226-018
Client Sample ID: TW4-24_03092015
Collection Date: 3/9/2015 1326h
Received Date: 3/13/2015 1015h

Contact: Garrin Palmer

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chloride	mg/L		3/17/2015 2021h	E300.0	100	944	
Nitrate/Nitrite (as N)	mg/L		3/20/2015 1826h	E353.2	10.0	34.6	

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INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Chloroform 2015
Lab Sample ID: 1503226-014
Client Sample ID: TW4-25_03092015
Collection Date: 3/9/2015 1300h
Received Date: 3/13/2015 1015h

Contact: Garrin Palmer

Analytical Results

3440 South 700 West
Salt Lake City, UT 84119

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chloride	mg/L		3/17/2015 1930h	E300.0	100	310	
Nitrate/Nitrite (as N)	mg/L		3/20/2015 1824h	E353.2	1.00	14.4	

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INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Chloroform 2015
Lab Sample ID: 1503326-006
Client Sample ID: TW4-60_03172015
Collection Date: 3/17/2015 855h
Received Date: 3/19/2015 945h

Contact: Garrin Palmer

Analytical Results

3440 South 700 West
Salt Lake City, UT 84119

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chloride	mg/L		3/19/2015 2315h	E300.0	1.00	< 1.00	
Nitrate/Nitrite (as N)	mg/L		3/27/2015 1855h	E353.2	0.100	< 0.100	

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INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Nitrate 2015
Lab Sample ID: 1502347-008
Client Sample ID: TWN-60_02192015
Collection Date: 2/19/2015 710h
Received Date: 2/20/2015 1045h

Analytical Results

3440 South 700 West
Salt Lake City, UT 84119

<u>Compound</u>	<u>Units</u>	<u>Date Prepared</u>	<u>Date Analyzed</u>	<u>Method Used</u>	<u>Reporting Limit</u>	<u>Analytical Result</u>	<u>Qual</u>
Chloride	mg/L		2/25/2015 2125h	E300.0	1.00	< 1.00	
Nitrate/Nitrite (as N)	mg/L		3/4/2015 1413h	E353.2	0.100	< 0.100	

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INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Nitrate 2015
Lab Sample ID: 1502347-007
Client Sample ID: TWN-65_02182015
Collection Date: 2/18/2015 1325h
Received Date: 2/20/2015 1045h

Analytical Results

3440 South 700 West
Salt Lake City, UT 84119

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chloride	mg/L		2/25/2015 1836h	E300.0	10.0	29.0	
Nitrate/Nitrite (as N)	mg/L		3/4/2015 1412h	E353.2	0.0100	1.41	

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Garrin Palmer
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RE: 1st Quarter Nitrate 2015

Dear Garrin Palmer:

Lab Set ID: 1502347

3440 South 700 West
Salt Lake City, UT 84119

American West Analytical Laboratories received 12 sample(s) on 2/20/2015 for the analyses presented in the following report.

Phone: (801) 263-8686
Toll Free: (888) 263-8686
Fax: (801) 263-8687
e-mail: awal@awal-labs.com
web: www.awal-labs.com

American West Analytical Laboratories (AWAL) is accredited by The National Environmental Laboratory Accreditation Program (NELAP) in Utah and Texas; and is state accredited in Colorado, Idaho, New Mexico, and Missouri.

All analyses were performed in accordance to the NELAP protocols unless noted otherwise. Accreditation scope documents are available upon request. If you have any questions or concerns regarding this report please feel free to call.

The abbreviation "Surr" found in organic reports indicates a surrogate compound that is intentionally added by the laboratory to determine sample injection, extraction, and/or purging efficiency. The "Reporting Limit" found on the report is equivalent to the practical quantitation limit (PQL). This is the minimum concentration that can be reported by the method referenced and the sample matrix. The reporting limit must not be confused with any regulatory limit. Analytical results are reported to three significant figures for quality control and calculation purposes.

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Thank You,

Approved by:

**Jose G.
Rocha**

Digitally signed by Jose G. Rocha
DN: cn=Jose G. Rocha,
o=American West Analytical
Laboratories, ou,
email=jose@awal-labs.com,
c=US
Date: 2015.03.11 15:23:24
-06'00'

Laboratory Director or designee



SAMPLE SUMMARY

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Nitrate 2015
Lab Set ID: 1502347
Date Received: 2/20/2015 1045h

Contact: Garrin Palmer

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1502347-001A	TWN-07_02192015	2/19/2015 735h	Aqueous	Anions, E300.0
1502347-001B	TWN-07_02192015	2/19/2015 735h	Aqueous	Nitrite/Nitrate (as N), E353.2
1502347-002A	TWN-04_02182015	2/18/2015 1256h	Aqueous	Anions, E300.0
1502347-002B	TWN-04_02182015	2/18/2015 1256h	Aqueous	Nitrite/Nitrate (as N), E353.2
1502347-003A	TWN-01_02182015	2/18/2015 1325h	Aqueous	Anions, E300.0
1502347-003B	TWN-01_02182015	2/18/2015 1325h	Aqueous	Nitrite/Nitrate (as N), E353.2
1502347-004A	TWN-18_02182015	2/18/2015 1401h	Aqueous	Anions, E300.0
1502347-004B	TWN-18_02182015	2/18/2015 1401h	Aqueous	Nitrite/Nitrate (as N), E353.2
1502347-005A	TWN-03_02192015	2/19/2015 745h	Aqueous	Anions, E300.0
1502347-005B	TWN-03_02192015	2/19/2015 745h	Aqueous	Nitrite/Nitrate (as N), E353.2
1502347-006A	TWN-02_02182015	2/18/2015 825h	Aqueous	Anions, E300.0
1502347-006B	TWN-02_02182015	2/18/2015 825h	Aqueous	Nitrite/Nitrate (as N), E353.2
1502347-007A	TWN-65_02182015	2/18/2015 1325h	Aqueous	Anions, E300.0
1502347-007B	TWN-65_02182015	2/18/2015 1325h	Aqueous	Nitrite/Nitrate (as N), E353.2
1502347-008A	TWN-60_02192015	2/19/2015 710h	Aqueous	Anions, E300.0
1502347-008B	TWN-60_02192015	2/19/2015 710h	Aqueous	Nitrite/Nitrate (as N), E353.2
1502347-009A	Piez-01_02182015	2/18/2015 857h	Aqueous	Anions, E300.0
1502347-009B	Piez-01_02182015	2/18/2015 857h	Aqueous	Nitrite/Nitrate (as N), E353.2
1502347-010A	Piez-02_02182015	2/18/2015 835h	Aqueous	Anions, E300.0
1502347-010B	Piez-02_02182015	2/18/2015 835h	Aqueous	Nitrite/Nitrate (as N), E353.2
1502347-011A	Piez-03_02182015	2/18/2015 845h	Aqueous	Anions, E300.0
1502347-011B	Piez-03_02182015	2/18/2015 845h	Aqueous	Nitrite/Nitrate (as N), E353.2
1502347-012A	TWN-07R_02182015	2/18/2015 1157h	Aqueous	Anions, E300.0
1502347-012B	TWN-07R_02182015	2/18/2015 1157h	Aqueous	Nitrite/Nitrate (as N), E353.2

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web: www.awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer



Inorganic Case Narrative

Client:	Energy Fuels Resources, Inc.
Contact:	Garrin Palmer
Project:	1st Quarter Nitrate 2015
Lab Set ID:	1502347

3440 South 700 West
Salt Lake City, UT 84119

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Sample Receipt Information:

Date of Receipt:	2/20/2015
Date(s) of Collection:	2/18 & 2/19/2015
Sample Condition:	Intact
C-O-C Discrepancies:	None

Holding Time and Preservation Requirements: The analysis and preparation for the samples were performed within the method holding times. The samples were properly preserved.

Preparation and Analysis Requirements: The samples were analyzed following the methods stated on the analytical reports.

Analytical QC Requirements: All instrument calibration and calibration check requirements were met. All internal standard recoveries met method criterion.

Batch QC Requirements: MB, LCS, MS, MSD, RPD:

Method Blanks (MB): No target analytes were detected above reporting limits, indicating that the procedure was free from contamination.

Laboratory Control Samples (LCS): All LCS recoveries were within control limits, indicating that the preparation and analysis were in control.

Matrix Spike / Matrix Spike Duplicates (MS/MSD): All percent recoveries and RPDs (Relative Percent Differences) were inside established limits, with the following exceptions:

Sample ID	Analyte	QC	Explanation
1502347-001B	Nitrate/Nitrite	MS/MSD/RPD	Sample matrix interference and suspected sample non-homogeneity or matrix interference.
1502347-011B	Nitrate/Nitrite	MS/MSD	Sample matrix interference

Corrective Action: None required.



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Kyle F. Gross
 Laboratory Director

Jose Rocha
 QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1502347
Project: 1st Quarter Nitrate 2015

Contact: Garrin Palmer
Dept: WC
QC Type: LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: LCS-R76056													
Date Analyzed: 02/25/2015 1319h													
Test Code: 300.0-W													
Chloride	4.87	mg/L	E300.0	0.00751	0.100	5.000	0	97.5	90 - 110				
Lab Sample ID: LCS-R76245													
Date Analyzed: 03/04/2015 1342h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	1.08	mg/L	E353.2	0.00833	0.0100	1.000	0	108	90 - 110				



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Kyle F. Gross
 Laboratory Director

Jose Rocha
 QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1502347
Project: 1st Quarter Nitrate 2015

Contact: Garrin Palmer
Dept: WC
QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB-R76056		Date Analyzed: 02/25/2015 1302h											
Test Code: 300.0-W													
Chloride	< 0.100	mg/L	E300.0	0.00751	0.100								
Lab Sample ID: MB-R76245		Date Analyzed: 03/04/2015 1340h											
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	< 0.0100	mg/L	E353.2	0.00833	0.0100								



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Kyle F. Gross
 Laboratory Director

Jose Rocha
 QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1502347
Project: 1st Quarter Nitrate 2015

Contact: Garrin Palmer
Dept: WC
QC Type: MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1502347-005AMS		Date Analyzed: 02/25/2015 1655h											
Test Code: 300.0-W													
Chloride	651	mg/L	E300.0	0.751	10.0	500.0	164	97.5	90 - 110				
Lab Sample ID: 1502347-011AMS		Date Analyzed: 02/25/2015 2017h											
Test Code: 300.0-W													
Chloride	76.7	mg/L	E300.0	0.0751	1.00	50.00	27.1	99.0	90 - 110				
Lab Sample ID: 1502347-001BMS		Date Analyzed: 03/04/2015 1353h											
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	3.04	mg/L	E353.2	0.0833	0.100	1.000	1.04	200	90 - 110				@
Lab Sample ID: 1502347-011BMS		Date Analyzed: 03/04/2015 1419h											
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	13.3	mg/L	E353.2	0.0833	0.100	1.000	1.82	1,150	90 - 110				@

@ - High RPD due to suspected sample non-homogeneity or matrix interference.
 ! - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.



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Kyle F. Gross
 Laboratory Director

Jose Rocha
 QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1502347
Project: 1st Quarter Nitrate 2015

Contact: Garrin Palmer
Dept: WC
QC Type: MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1502347-005AMSD Date Analyzed: 02/25/2015 1712h													
Test Code: 300.0-W													
Chloride	649	mg/L	E300.0	0.751	10.0	500.0	164	97.0	90 - 110	651	0.419	20	
Lab Sample ID: 1502347-011AMSD Date Analyzed: 02/25/2015 2034h													
Test Code: 300.0-W													
Chloride	76.3	mg/L	E300.0	0.0751	1.00	50.00	27.1	98.4	90 - 110	76.7	0.404	20	
Lab Sample ID: 1502347-001BMSD Date Analyzed: 03/04/2015 1354h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	2.44	mg/L	E353.2	0.0833	0.100	1.000	1.04	140	90 - 110	3.04	21.8	10	@
Lab Sample ID: 1502347-011BMSD Date Analyzed: 03/04/2015 1420h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	12.4	mg/L	E353.2	0.0833	0.100	1.000	1.82	1,060	90 - 110	13.3	7.00	10	@

@ - High RPD due to suspected sample non-homogeneity or matrix interference.
 † - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.

American West Analytical Laboratories

UL
Denison

WORK ORDER Summary

Work Order: **1502347** Page 1 of 2

Client: Energy Fuels Resources, Inc. **Due Date:** 3/3/2015
Client ID: DEN100 **Contact:** Garrin Palmer
Project: 1st Quarter Nitrate 2015 **QC Level:** III **WO Type:** Project
Comments: PA Rush. QC 3 (Summary/No chromatograms). MUST report project specific DL's: Cl @ 1 mg/L, NO2/NO3 @ 0.1 mg/L. EDD-Denison & LOCUS. Email Group; SAMPLES WITH AN "R" OR TWN-60 CAN NOT BE RUN BY 4500, THEY MUST BE RUN BY 300.0.;

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage
1502347-001A	TWN-07_02192015	2/19/2015 0735h	2/20/2015 1045h	300.0-W 1 SEL Analytes: CL	Aqueous	df - cl	1
1502347-001B				NO2/NO3-W-353.2 1 SEL Analytes: NO3NO2N		df - no2/no3	
1502347-002A	TWN-04_02182015	2/18/2015 1256h	2/20/2015 1045h	300.0-W 1 SEL Analytes: CL	Aqueous	df - cl	1
1502347-002B				NO2/NO3-W-353.2 1 SEL Analytes: NO3NO2N		df - no2/no3	
1502347-003A	TWN-01_02182015	2/18/2015 1325h	2/20/2015 1045h	300.0-W 1 SEL Analytes: CL	Aqueous	df - cl	1
1502347-003B				NO2/NO3-W-353.2 1 SEL Analytes: NO3NO2N		df - no2/no3	
1502347-004A	TWN-18_02182015	2/18/2015 1401h	2/20/2015 1045h	300.0-W 1 SEL Analytes: CL	Aqueous	df - cl	1
1502347-004B				NO2/NO3-W-353.2 1 SEL Analytes: NO3NO2N		df - no2/no3	
1502347-005A	TWN-03_02192015	2/19/2015 0745h	2/20/2015 1045h	300.0-W 1 SEL Analytes: CL	Aqueous	df - cl	1
1502347-005B				NO2/NO3-W-353.2 1 SEL Analytes: NO3NO2N		df - no2/no3	
1502347-006A	TWN-02_02182015	2/18/2015 0825h	2/20/2015 1045h	300.0-W 1 SEL Analytes: CL	Aqueous	df - cl	1
1502347-006B				NO2/NO3-W-353.2 1 SEL Analytes: NO3NO2N		df - no2/no3	
1502347-007A	TWN-65_02182015	2/18/2015 1325h	2/20/2015 1045h	300.0-W 1 SEL Analytes: CL	Aqueous	df - cl	1
1502347-007B				NO2/NO3-W-353.2 1 SEL Analytes: NO3NO2N		df - no2/no3	
1502347-008A	TWN-60_02192015	2/19/2015 0710h	2/20/2015 1045h	300.0-W 1 SEL Analytes: CL	Aqueous	df - cl	1

WORK ORDER SummaryWork Order: **1502347** Page 2 of 2

Client: Energy Fuels Resources, Inc.

Due Date: 3/3/2015

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel Storage
1502347-008B	TWN-60_02192015	2/19/2015 0710h	2/20/2015 1045h	NO2/NO3-W-353.2 1 SEL Analytes: NO3NO2N	Aqueous	df - no2/no3
1502347-009A	Piez-01_02182015	2/18/2015 0857h	2/20/2015 1045h	300.0-W 1 SEL Analytes: CL	Aqueous	df - cl
1502347-009B				NO2/NO3-W-353.2 1 SEL Analytes: NO3NO2N		df - no2/no3
1502347-010A	Piez-02_02182015	2/18/2015 0835h	2/20/2015 1045h	300.0-W 1 SEL Analytes: CL	Aqueous	df - cl
1502347-010B				NO2/NO3-W-353.2 1 SEL Analytes: NO3NO2N		df - no2/no3
1502347-011A	Piez-03_02182015	2/18/2015 0845h	2/20/2015 1045h	300.0-W 1 SEL Analytes: CL	Aqueous	df - cl
1502347-011B				NO2/NO3-W-353.2 1 SEL Analytes: NO3NO2N		df - no2/no3
1502347-012A	TWN-07R_02182015	2/18/2015 1157h	2/20/2015 1045h	300.0-W 1 SEL Analytes: CL	Aqueous	df - cl
1502347-012B				NO2/NO3-W-353.2 1 SEL Analytes: NO3NO2N		df - no2/no3

Lab Set ID: 1502347

Preservation Check Sheet

Sample Set Extension and pH

Analysis	Preservative	1	2	3	4	5	6	7	8	9	10	11	12
Ammonia	pH <2 H ₂ SO ₄												
COD	pH <2 H ₂ SO ₄												
Cyanide	pH >12 NaOH												
Metals	pH <2 HNO ₃												
NO ₂ & NO ₃	pH <2 H ₂ SO ₄	yes											
O & G	pH <2 HCL												
Phenols	pH <2 H ₂ SO ₄												
Sulfide	pH > 9NaOH, Zn Acetate												
TKN	pH <2 H ₂ SO ₄												
T PO ₄	pH <2 H ₂ SO ₄												

- Procedure:
- 1) Pour a small amount of sample in the sample lid
 - 2) Pour sample from Lid gently over wide range pH paper
 - 3) **Do Not** dip the pH paper in the sample bottle or lid
 - 4) If sample is not preserved, properly list its extension and receiving pH in the appropriate column above
 - 5) Flag COC, notify client if requested
 - 6) Place client conversation on COC
 - 7) Samples may be adjusted

Frequency: All samples requiring preservation

- * The sample required additional preservative upon receipt.
- + The sample was received unpreserved
- ▲ The Sample was received unpreserved and therefore preserved upon receipt.
- # The sample pH was unadjustable to a pH < 2 due to the sample matrix
- The sample pH was unadjustable to a pH > ____ due to the sample matrix interference



Garrin Palmer
Energy Fuels Resources, Inc.
6425 S. Hwy 191
Blanding, UT 84511
TEL: (435) 678-2221

RE: 1st Quarter Chloroform 2015

Dear Garrin Palmer:

Lab Set ID: 1503226

3440 South 700 West
Salt Lake City, UT 84119

American West Analytical Laboratories received 37 sample(s) on 3/13/2015 for the analyses presented in the following report.

Phone: (801) 263-8686
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e-mail: awal@awal-labs.com

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web: www.awal-labs.com

All analyses were performed in accordance to the NELAP protocols unless noted otherwise. Accreditation scope documents are available upon request. If you have any questions or concerns regarding this report please feel free to call.

The abbreviation "Surr" found in organic reports indicates a surrogate compound that is intentionally added by the laboratory to determine sample injection, extraction, and/or purging efficiency. The "Reporting Limit" found on the report is equivalent to the practical quantitation limit (PQL). This is the minimum concentration that can be reported by the method referenced and the sample matrix. The reporting limit must not be confused with any regulatory limit. Analytical results are reported to three significant figures for quality control and calculation purposes.

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Thank You,

Approved by:

Jose G. Rocha	Digitally signed by Jose G. Rocha
	DN: cn=Jose G. Rocha, o=American West Analytical Laboratories, ou, email=jose@awal-labs.com, c=US Date: 2015.03.27 11:01:24 -06'00'

Laboratory Director or designee



SAMPLE SUMMARY

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Chloroform 2015
Lab Set ID: 1503226
Date Received: 3/13/2015 1015h

Contact: Garrin Palmer

3440 South 700 West Salt Lake City, UT 84119	Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
	1503226-001A	TW4-03R_03102015	3/10/2015 755h	Aqueous	Anions, E300.0
	1503226-001B	TW4-03R_03102015	3/10/2015 755h	Aqueous	Nitrite/Nitrate (as N), E353.2
	1503226-001C	TW4-03R_03102015	3/10/2015 755h	Aqueous	VOA by GC/MS Method 8260C/5030C
Phone: (801) 263-8686	1503226-002A	TW4-03_03112015	3/11/2015 746h	Aqueous	Anions, E300.0
Toll Free: (888) 263-8686	1503226-002B	TW4-03_03112015	3/11/2015 746h	Aqueous	Nitrite/Nitrate (as N), E353.2
Fax: (801) 263-8687	1503226-002C	TW4-03_03112015	3/11/2015 746h	Aqueous	VOA by GC/MS Method 8260C/5030C
e-mail: awal@awal-labs.com	1503226-003A	TW4-12_03112015	3/11/2015 757h	Aqueous	Anions, E300.0
	1503226-003B	TW4-12_03112015	3/11/2015 757h	Aqueous	Nitrite/Nitrate (as N), E353.2
web: www.awal-labs.com	1503226-003C	TW4-12_03112015	3/11/2015 757h	Aqueous	VOA by GC/MS Method 8260C/5030C
	1503226-004A	TW4-28_03112015	3/11/2015 804h	Aqueous	Anions, E300.0
Kyle F. Gross	1503226-004B	TW4-28_03112015	3/11/2015 804h	Aqueous	Nitrite/Nitrate (as N), E353.2
Laboratory Director	1503226-004C	TW4-28_03112015	3/11/2015 804h	Aqueous	VOA by GC/MS Method 8260C/5030C
	1503226-005A	TW4-32_03112015	3/11/2015 810h	Aqueous	Anions, E300.0
Jose Rocha	1503226-005B	TW4-32_03112015	3/11/2015 810h	Aqueous	Nitrite/Nitrate (as N), E353.2
QA Officer	1503226-005C	TW4-32_03112015	3/11/2015 810h	Aqueous	VOA by GC/MS Method 8260C/5030C
	1503226-006A	TW4-13_03112015	3/11/2015 817h	Aqueous	Anions, E300.0
	1503226-006B	TW4-13_03112015	3/11/2015 817h	Aqueous	Nitrite/Nitrate (as N), E353.2
	1503226-006C	TW4-13_03112015	3/11/2015 817h	Aqueous	VOA by GC/MS Method 8260C/5030C
	1503226-007A	TW4-36_03112015	3/11/2015 823h	Aqueous	Anions, E300.0
	1503226-007B	TW4-36_03112015	3/11/2015 823h	Aqueous	Nitrite/Nitrate (as N), E353.2
	1503226-007C	TW4-36_03112015	3/11/2015 823h	Aqueous	VOA by GC/MS Method 8260C/5030C
	1503226-008A	TW4-27_03112015	3/11/2015 830h	Aqueous	Anions, E300.0
	1503226-008B	TW4-27_03112015	3/11/2015 830h	Aqueous	Nitrite/Nitrate (as N), E353.2
	1503226-008C	TW4-27_03112015	3/11/2015 830h	Aqueous	VOA by GC/MS Method 8260C/5030C
	1503226-009A	TW4-30_03112015	3/11/2015 835h	Aqueous	Anions, E300.0
	1503226-009B	TW4-30_03112015	3/11/2015 835h	Aqueous	Nitrite/Nitrate (as N), E353.2
	1503226-009C	TW4-30_03112015	3/11/2015 835h	Aqueous	VOA by GC/MS Method 8260C/5030C
	1503226-010A	TW4-31_03112015	3/11/2015 841h	Aqueous	Anions, E300.0
	1503226-010B	TW4-31_03112015	3/11/2015 841h	Aqueous	Nitrite/Nitrate (as N), E353.2



Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Chloroform 2015
Lab Set ID: 1503226
Date Received: 3/13/2015 1015h

Contact: Garrin Palmer

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 Salt Lake City, UT 84119

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Kyle F. Gross
 Laboratory Director

Jose Rocha
 QA Officer

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1503226-010C	TW4-31_03112015	3/11/2015 841h	Aqueous	VOA by GC/MS Method 8260C/5030C
1503226-011A	TW4-34_03112015	3/11/2015 847h	Aqueous	Anions, E300.0
1503226-011B	TW4-34_03112015	3/11/2015 847h	Aqueous	Nitrite/Nitrate (as N), E353.2
1503226-011C	TW4-34_03112015	3/11/2015 847h	Aqueous	VOA by GC/MS Method 8260C/5030C
1503226-012A	TW4-35_03112015	3/11/2015 853h	Aqueous	Anions, E300.0
1503226-012B	TW4-35_03112015	3/11/2015 853h	Aqueous	Nitrite/Nitrate (as N), E353.2
1503226-012C	TW4-35_03112015	3/11/2015 853h	Aqueous	VOA by GC/MS Method 8260C/5030C
1503226-013A	TW4-23_03122015	3/12/2015 703h	Aqueous	Anions, E300.0
1503226-013B	TW4-23_03122015	3/12/2015 703h	Aqueous	Nitrite/Nitrate (as N), E353.2
1503226-013C	TW4-23_03122015	3/12/2015 703h	Aqueous	VOA by GC/MS Method 8260C/5030C
1503226-014A	TW4-25_03092015	3/9/2015 1300h	Aqueous	Anions, E300.0
1503226-014B	TW4-25_03092015	3/9/2015 1300h	Aqueous	Nitrite/Nitrate (as N), E353.2
1503226-014C	TW4-25_03092015	3/9/2015 1300h	Aqueous	VOA by GC/MS Method 8260C/5030C
1503226-015A	TW4-14_03122015	3/12/2015 712h	Aqueous	Anions, E300.0
1503226-015B	TW4-14_03122015	3/12/2015 712h	Aqueous	Nitrite/Nitrate (as N), E353.2
1503226-015C	TW4-14_03122015	3/12/2015 712h	Aqueous	VOA by GC/MS Method 8260C/5030C
1503226-016A	TW4-26_03122015	3/12/2015 720h	Aqueous	Anions, E300.0
1503226-016B	TW4-26_03122015	3/12/2015 720h	Aqueous	Nitrite/Nitrate (as N), E353.2
1503226-016C	TW4-26_03122015	3/12/2015 720h	Aqueous	VOA by GC/MS Method 8260C/5030C
1503226-017A	TW4-05_03122015	3/12/2015 728h	Aqueous	Anions, E300.0
1503226-017B	TW4-05_03122015	3/12/2015 728h	Aqueous	Nitrite/Nitrate (as N), E353.2
1503226-017C	TW4-05_03122015	3/12/2015 728h	Aqueous	VOA by GC/MS Method 8260C/5030C
1503226-018A	TW4-24_03092015	3/9/2015 1326h	Aqueous	Anions, E300.0
1503226-018B	TW4-24_03092015	3/9/2015 1326h	Aqueous	Nitrite/Nitrate (as N), E353.2
1503226-018C	TW4-24_03092015	3/9/2015 1326h	Aqueous	VOA by GC/MS Method 8260C/5030C
1503226-019A	TW4-18_03122015	3/12/2015 738h	Aqueous	Anions, E300.0
1503226-019B	TW4-18_03122015	3/12/2015 738h	Aqueous	Nitrite/Nitrate (as N), E353.2
1503226-019C	TW4-18_03122015	3/12/2015 738h	Aqueous	VOA by GC/MS Method 8260C/5030C
1503226-020A	TW4-09_03122015	3/12/2015 747h	Aqueous	Anions, E300.0
1503226-020B	TW4-09_03122015	3/12/2015 747h	Aqueous	Nitrite/Nitrate (as N), E353.2



Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Chloroform 2015
Lab Set ID: 1503226
Date Received: 3/13/2015 1015h

Contact: Garrin Palmer

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1503226-020C	TW4-09_03122015	3/12/2015 747h	Aqueous	VOA by GC/MS Method 8260C/5030C
1503226-021A	TW4-33_03122015	3/12/2015 755h	Aqueous	Anions, E300.0
1503226-021B	TW4-33_03122015	3/12/2015 755h	Aqueous	Nitrite/Nitrate (as N), E353.2
1503226-021C	TW4-33_03122015	3/12/2015 755h	Aqueous	VOA by GC/MS Method 8260C/5030C
1503226-022A	TW4-08_03122015	3/12/2015 803h	Aqueous	Anions, E300.0
1503226-022B	TW4-08_03122015	3/12/2015 803h	Aqueous	Nitrite/Nitrate (as N), E353.2
1503226-022C	TW4-08_03122015	3/12/2015 803h	Aqueous	VOA by GC/MS Method 8260C/5030C
1503226-023A	TW4-21_03122015	3/12/2015 811h	Aqueous	Anions, E300.0
1503226-023B	TW4-21_03122015	3/12/2015 811h	Aqueous	Nitrite/Nitrate (as N), E353.2
1503226-023C	TW4-21_03122015	3/12/2015 811h	Aqueous	VOA by GC/MS Method 8260C/5030C
1503226-024A	TW4-29_03122015	3/12/2015 821h	Aqueous	Anions, E300.0
1503226-024B	TW4-29_03122015	3/12/2015 821h	Aqueous	Nitrite/Nitrate (as N), E353.2
1503226-024C	TW4-29_03122015	3/12/2015 821h	Aqueous	VOA by GC/MS Method 8260C/5030C
1503226-025A	TW4-16_03122015	3/12/2015 830h	Aqueous	Anions, E300.0
1503226-025B	TW4-16_03122015	3/12/2015 830h	Aqueous	Nitrite/Nitrate (as N), E353.2
1503226-025C	TW4-16_03122015	3/12/2015 830h	Aqueous	VOA by GC/MS Method 8260C/5030C
1503226-026A	TW4-11_03092015	3/9/2015 1408h	Aqueous	Anions, E300.0
1503226-026B	TW4-11_03092015	3/9/2015 1408h	Aqueous	Nitrite/Nitrate (as N), E353.2
1503226-026C	TW4-11_03092015	3/9/2015 1408h	Aqueous	VOA by GC/MS Method 8260C/5030C
1503226-027A	TW4-04_03092015	3/9/2015 1453h	Aqueous	Anions, E300.0
1503226-027B	TW4-04_03092015	3/9/2015 1453h	Aqueous	Nitrite/Nitrate (as N), E353.2
1503226-027C	TW4-04_03092015	3/9/2015 1453h	Aqueous	VOA by GC/MS Method 8260C/5030C
1503226-028A	TW4-01_03092015	3/9/2015 1443h	Aqueous	Anions, E300.0
1503226-028B	TW4-01_03092015	3/9/2015 1443h	Aqueous	Nitrite/Nitrate (as N), E353.2
1503226-028C	TW4-01_03092015	3/9/2015 1443h	Aqueous	VOA by GC/MS Method 8260C/5030C
1503226-029A	MW-04_03092015	3/9/2015 1437h	Aqueous	Anions, E300.0
1503226-029B	MW-04_03092015	3/9/2015 1437h	Aqueous	Nitrite/Nitrate (as N), E353.2
1503226-029C	MW-04_03092015	3/9/2015 1437h	Aqueous	VOA by GC/MS Method 8260C/5030C
1503226-030A	MW-26_03092015	3/9/2015 1400h	Aqueous	Anions, E300.0
1503226-030B	MW-26_03092015	3/9/2015 1400h	Aqueous	Nitrite/Nitrate (as N), E353.2



Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Chloroform 2015
Lab Set ID: 1503226
Date Received: 3/13/2015 1015h

Contact: Garrin Palmer

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Kyle F. Gross
 Laboratory Director

Jose Rocha
 QA Officer

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1503226-030C	MW-26_03092015	3/9/2015 1400h	Aqueous	VOA by GC/MS Method 8260C/5030C
1503226-031A	TW4-02_03092015	3/9/2015 1427h	Aqueous	Anions, E300.0
1503226-031B	TW4-02_03092015	3/9/2015 1427h	Aqueous	Nitrite/Nitrate (as N), E353.2
1503226-031C	TW4-02_03092015	3/9/2015 1427h	Aqueous	VOA by GC/MS Method 8260C/5030C
1503226-032A	TW4-19_03092015	3/9/2015 1200h	Aqueous	Anions, E300.0
1503226-032B	TW4-19_03092015	3/9/2015 1200h	Aqueous	Nitrite/Nitrate (as N), E353.2
1503226-032C	TW4-19_03092015	3/9/2015 1200h	Aqueous	VOA by GC/MS Method 8260C/5030C
1503226-033A	TW4-22_03092015	3/9/2015 1336h	Aqueous	Anions, E300.0
1503226-033B	TW4-22_03092015	3/9/2015 1336h	Aqueous	Nitrite/Nitrate (as N), E353.2
1503226-033C	TW4-22_03092015	3/9/2015 1336h	Aqueous	VOA by GC/MS Method 8260C/5030C
1503226-034A	TW4-20_03092015	3/9/2015 1350h	Aqueous	Anions, E300.0
1503226-034B	TW4-20_03092015	3/9/2015 1350h	Aqueous	Nitrite/Nitrate (as N), E353.2
1503226-034C	TW4-20_03092015	3/9/2015 1350h	Aqueous	VOA by GC/MS Method 8260C/5030C
1503226-035A	TW4-65_03112015	3/11/2015 810h	Aqueous	Anions, E300.0
1503226-035B	TW4-65_03112015	3/11/2015 810h	Aqueous	Nitrite/Nitrate (as N), E353.2
1503226-035C	TW4-65_03112015	3/11/2015 810h	Aqueous	VOA by GC/MS Method 8260C/5030C
1503226-036A	TW4-70_03122015	3/12/2015 728h	Aqueous	Anions, E300.0
1503226-036B	TW4-70_03122015	3/12/2015 728h	Aqueous	Nitrite/Nitrate (as N), E353.2
1503226-036C	TW4-70_03122015	3/12/2015 728h	Aqueous	VOA by GC/MS Method 8260C/5030C
1503226-037A	Trip Blank	3/9/2015	Aqueous	VOA by GC/MS Method 8260C/5030C



Inorganic Case Narrative

Client: Energy Fuels Resources, Inc.
Contact: Garrin Palmer
Project: 1st Quarter Chloroform 2015
Lab Set ID: 1503226

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Sample Receipt Information:

Date of Receipt: 3/13/2015
Date(s) of Collection: 3/9 – 3/12/2015
Sample Condition: Intact
C-O-C Discrepancies: None

Holding Time and Preservation Requirements: The analysis and preparation for the samples were performed within the method holding times. The samples were properly preserved.

Preparation and Analysis Requirements: The samples were analyzed following the methods stated on the analytical reports.

Analytical QC Requirements: All instrument calibration and calibration check requirements were met. All internal standard recoveries met method criterion.

Batch QC Requirements: MB, LCS, MS, MSD, RPD:

Method Blanks (MB): No target analytes were detected above reporting limits, indicating that the procedure was free from contamination.

Laboratory Control Samples (LCS): All LCS recoveries were within control limits, indicating that the preparation and analysis were in control.

Matrix Spike / Matrix Spike Duplicates (MS/MSD): All percent recoveries and RPDs (Relative Percent Differences) were inside established limits, with the following exceptions:

Sample ID	Analyte	QC	Explanation
1503226-021B	Nitrate-Nitrite (as N)	MS/MSD	Sample matrix interference
1503226-032B	Nitrate-Nitrite (as N)	MSD	Sample matrix interference

Corrective Action: None required.



Volatile Case Narrative

Client: Energy Fuels Resources, Inc.
Contact: Garrin Palmer
Project: 1st Quarter Chloroform 2015
Lab Set ID: 1503226

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Sample Receipt Information:

Date of Receipt: 3/13/2015
Date(s) of Collection: 3/9 – 3/12/2015
Sample Condition: Intact
C-O-C Discrepancies: None
Method: SW-846 8260C/5030C
Analysis: Volatile Organic Compounds

General Set Comments: Multiple target analytes were observed above reporting limits.

Holding Time and Preservation Requirements: All samples were received in appropriate containers and properly preserved. The analysis and preparation of all samples were performed within the method holding times following the methods stated on the analytical reports.

Analytical QC Requirements: All instrument calibration and calibration check requirements were met. All internal standard recoveries met method criterion.

Batch QC Requirements: MB, LCS, MS, MSD, RPD, and Surrogates:

Method Blanks (MBs): No target analytes were detected above reporting limits, indicating that the procedure was free from contamination.

Laboratory Control Sample (LCS): All LCS recoveries were within control limits, indicating that the preparation and analysis were in control.

Matrix Spike / Matrix Spike Duplicates (MS/MSD): All percent recoveries and RPDs (Relative Percent Differences) were inside established limits, indicating no apparent matrix interferences.

Surrogates: All surrogate recoveries were within established limits.

Corrective Action: None required.



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1503226
Project: 1st Quarter Chloroform 2015

Contact: Garrin Palmer
Dept: WC
QC Type: LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: LCS-R76622	Date Analyzed: 03/16/2015 1234h												
Test Code: 300.0-W													
Chloride	4.83	mg/L	E300.0	0.00751	0.100	5.000	0	96.7	90 - 110				
Lab Sample ID: LCS-R76625	Date Analyzed: 03/16/2015 2204h												
Test Code: 300.0-W													
Chloride	4.84	mg/L	E300.0	0.00751	0.100	5.000	0	96.8	90 - 110				
Lab Sample ID: LCS-R76677	Date Analyzed: 03/17/2015 1625h												
Test Code: 300.0-W													
Chloride	4.79	mg/L	E300.0	0.00751	0.100	5.000	0	95.8	90 - 110				
Lab Sample ID: LCS-R76791	Date Analyzed: 03/20/2015 1638h												
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	1.03	mg/L	E353.2	0.00833	0.0100	1.000	0	103	90 - 110				



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 Laboratory Director

Jose Rocha
 QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1503226
Project: 1st Quarter Chloroform 2015

Contact: Garrin Palmer
Dept: WC
QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB-R76622	Date Analyzed: 03/16/2015 1217h												
Test Code:	300.0-W												
Chloride	< 0.100	mg/L	E300.0	0.00751	0.100								
Lab Sample ID: MB-R76625	Date Analyzed: 03/16/2015 2147h												
Test Code:	300.0-W												
Chloride	< 0.100	mg/L	E300.0	0.00751	0.100								
Lab Sample ID: MB-R76677	Date Analyzed: 03/17/2015 1608h												
Test Code:	300.0-W												
Chloride	< 0.100	mg/L	E300.0	0.00751	0.100								
Lab Sample ID: MB-R76791	Date Analyzed: 03/20/2015 1636h												
Test Code:	NO2/NO3-W-353.2												
Nitrate/Nitrite (as N)	< 0.0100	mg/L	E353.2	0.00833	0.0100								



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Jose Rocha
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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1503226
Project: 1st Quarter Chloroform 2015

Contact: Garrin Palmer
Dept: WC
QC Type: MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1503226-003AMS Date Analyzed: 03/16/2015 1721h													
Test Code: 300.0-W													
Chloride	99.6	mg/L	E300.0	0.0751	1.00	50.00	50.6	98.0	90 - 110				
Lab Sample ID: 1503226-018AMS Date Analyzed: 03/16/2015 2238h													
Test Code: 300.0-W													
Chloride	5,680	mg/L	E300.0	7.51	100	5,000	944	94.7	90 - 110				
Lab Sample ID: 1503226-021AMS Date Analyzed: 03/17/2015 237h													
Test Code: 300.0-W													
Chloride	92.5	mg/L	E300.0	0.0751	1.00	50.00	44.2	96.5	90 - 110				
Lab Sample ID: 1503226-014AMS Date Analyzed: 03/17/2015 1947h													
Test Code: 300.0-W													
Chloride	804	mg/L	E300.0	0.751	10.0	500.0	310	98.8	90 - 110				
Lab Sample ID: 1503226-001BMS Date Analyzed: 03/20/2015 1641h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	1.03	mg/L	E353.2	0.00833	0.0100	1.000	0	103	90 - 110				
Lab Sample ID: 1503226-011BMS Date Analyzed: 03/20/2015 1817h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	2.21	mg/L	E353.2	0.0167	0.0200	1.000	1.21	100	90 - 110				
Lab Sample ID: 1503226-021BMS Date Analyzed: 03/20/2015 1827h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	3.23	mg/L	E353.2	0.0417	0.0500	1.000	1.91	132	90 - 110				
Lab Sample ID: 1503226-032BMS Date Analyzed: 03/20/2015 1833h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	9.50	mg/L	E353.2	0.0833	0.100	1.000	8.56	94.0	90 - 110				

¹ - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.



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Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1503226
Project: 1st Quarter Chloroform 2015

Contact: Garrin Palmer
Dept: WC
QC Type: MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1503226-003AMSD Date Analyzed: 03/16/2015 1751h													
Test Code: 300.0-W													
Chloride	100	mg/L	E300.0	0.0751	1.00	50.00	50.6	99.7	90 - 110	99.6	0.857	20	
Lab Sample ID: 1503226-018AMSD Date Analyzed: 03/16/2015 2255h													
Test Code: 300.0-W													
Chloride	5,760	mg/L	E300.0	7.51	100	5,000	944	96.3	90 - 110	5680	1.43	20	
Lab Sample ID: 1503226-021AMSD Date Analyzed: 03/17/2015 254h													
Test Code: 300.0-W													
Chloride	91.9	mg/L	E300.0	0.0751	1.00	50.00	44.2	95.2	90 - 110	92.5	0.659	20	
Lab Sample ID: 1503226-014AMSD Date Analyzed: 03/17/2015 2004h													
Test Code: 300.0-W													
Chloride	812	mg/L	E300.0	0.751	10.0	500.0	310	100	90 - 110	804	0.978	20	
Lab Sample ID: 1503226-001BMSD Date Analyzed: 03/20/2015 1642h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	1.03	mg/L	E353.2	0.00833	0.0100	1.000	0	103	90 - 110	1.03	0.777	10	
Lab Sample ID: 1503226-011BMSD Date Analyzed: 03/20/2015 1819h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	2.26	mg/L	E353.2	0.0167	0.0200	1.000	1.21	105	90 - 110	2.21	2.19	10	
Lab Sample ID: 1503226-021BMSD Date Analyzed: 03/20/2015 1829h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	3.23	mg/L	E353.2	0.0417	0.0500	1.000	1.91	132	90 - 110	3.23	0.0929	10	
Lab Sample ID: 1503226-032BMSD Date Analyzed: 03/20/2015 1834h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	9.70	mg/L	E353.2	0.0833	0.100	1.000	8.56	114	90 - 110	9.5	2.12	10	

¹ - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.

American West Analytical Laboratories

UL
Denison

WORK ORDER Summary

Work Order: **1503226**

Page 1 of 6

Client: Energy Fuels Resources, Inc.

Due Date: 3/24/2015

Client ID: DEN100

Contact: Garrin Palmer

Project: 1st Quarter Chloroform 2015

QC Level: III

WO Type: Project

Comments: PA Rush. QC 3 (Summary/No chromatograms). RL of 1 ppm for Chloride and VOC and 0.1 ppm for NO2/NO3. Expected levels provided by client - see Jenn. J-flag what we can't meet. EIM Locus and EDD-Denison. Email Group.;

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1503226-001A	TW4-03R_03102015	3/10/2015 0755h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-001B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-001C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1503226-002A	TW4-03_03112015	3/11/2015 0746h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-002B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-002C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1503226-003A	TW4-12_03112015	3/11/2015 0757h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-003B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-003C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1503226-004A	TW4-28_03112015	3/11/2015 0804h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-004B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-004C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1503226-005A	TW4-32_03112015	3/11/2015 0810h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-005B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-005C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3

WORK ORDER Summary

Work Order: **1503226** Page 2 of 6

Client: Energy Fuels Resources, Inc.

Due Date: 3/24/2015

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1503226-006A	TW4-13_03112015	3/11/2015 0817h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-006B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-006C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1503226-007A	TW4-36_03112015	3/11/2015 0823h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-007B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-007C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1503226-008A	TW4-27_03112015	3/11/2015 0830h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-008B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-008C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1503226-009A	TW4-30_03112015	3/11/2015 0835h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-009B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-009C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1503226-010A	TW4-31_03112015	3/11/2015 0841h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-010B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-010C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1503226-011A	TW4-34_03112015	3/11/2015 0847h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-011B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-011C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1503226-012A	TW4-35_03112015	3/11/2015 0853h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1

WORK ORDER Summary

Work Order: **1503226** Page 3 of 6

Client: Energy Fuels Resources, Inc.

Due Date: 3/24/2015

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1503226-012B	TW4-35_03112015	3/11/2015 0853h	3/13/2015 1015h	NO2/NO3-W-353.2	Aqueous	<input checked="" type="checkbox"/>	df - no2/no3	1
				1 SEL Analytes: NO3NO2N				
1503226-012C				8260-W-DEN100		<input checked="" type="checkbox"/>	VOCFridge	3
Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4								
1503226-013A	TW4-23_03122015	3/12/2015 0703h	3/13/2015 1015h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
				1 SEL Analytes: CL				
1503226-013B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3	
				1 SEL Analytes: NO3NO2N				
1503226-013C				8260-W-DEN100		<input checked="" type="checkbox"/>	VOCFridge	3
Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4								
1503226-014A	TW4-25_03092015	3/9/2015 1300h	3/13/2015 1015h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
				1 SEL Analytes: CL				
1503226-014B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3	
				1 SEL Analytes: NO3NO2N				
1503226-014C				8260-W-DEN100		<input checked="" type="checkbox"/>	VOCFridge	3
Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4								
1503226-015A	TW4-14_03122015	3/12/2015 0712h	3/13/2015 1015h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
				1 SEL Analytes: CL				
1503226-015B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3	
				1 SEL Analytes: NO3NO2N				
1503226-015C				8260-W-DEN100		<input checked="" type="checkbox"/>	VOCFridge	3
Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4								
1503226-016A	TW4-26_03122015	3/12/2015 0720h	3/13/2015 1015h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
				1 SEL Analytes: CL				
1503226-016B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3	
				1 SEL Analytes: NO3NO2N				
1503226-016C				8260-W-DEN100		<input checked="" type="checkbox"/>	VOCFridge	3
Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4								
1503226-017A	TW4-05_03122015	3/12/2015 0728h	3/13/2015 1015h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
				1 SEL Analytes: CL				
1503226-017B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3	
				1 SEL Analytes: NO3NO2N				
1503226-017C				8260-W-DEN100		<input checked="" type="checkbox"/>	VOCFridge	3
Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4								
1503226-018A	TW4-24_03092015	3/9/2015 1326h	3/13/2015 1015h	300.0-W	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
				1 SEL Analytes: CL				
1503226-018B				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3	
				1 SEL Analytes: NO3NO2N				

WORK ORDER Summary

Work Order: **1503226** Page 4 of 6

Client: Energy Fuels Resources, Inc.

Due Date: 3/24/2015

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1503226-018C	TW4-24_03092015	3/9/2015 1326h	3/13/2015 1015h	8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
1503226-019A	TW4-18_03122015	3/12/2015 0738h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-019B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-019C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1503226-020A	TW4-09_03122015	3/12/2015 0747h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-020B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-020C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1503226-021A	TW4-33_03122015	3/12/2015 0755h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-021B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-021C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1503226-022A	TW4-08_03122015	3/12/2015 0803h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-022B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-022C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1503226-023A	TW4-21_03122015	3/12/2015 0811h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-023B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-023C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1503226-024A	TW4-29_03122015	3/12/2015 0821h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-024B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-024C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3

WORK ORDER Summary

Work Order: **1503226**

Page 5 of 6

Client: Energy Fuels Resources, Inc.

Due Date: 3/24/2015

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1503226-025A	TW4-16_03122015	3/12/2015 0830h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-025B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-025C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1503226-026A	TW4-11_03092015	3/9/2015 1408h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-026B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-026C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1503226-027A	TW4-04_03092015	3/9/2015 1453h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-027B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-027C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1503226-028A	TW4-01_03092015	3/9/2015 1443h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-028B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-028C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1503226-029A	MW-04_03092015	3/9/2015 1437h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-029B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-029C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1503226-030A	MW-26_03092015	3/9/2015 1400h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-030B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-030C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1503226-031A	TW4-02_03092015	3/9/2015 1427h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1

WORK ORDER Summary

Work Order: **1503226** Page 6 of 6

Client: Energy Fuels Resources, Inc.

Due Date: 3/24/2015

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1503226-031B	TW4-02_03092015	3/9/2015 1427h	3/13/2015 1015h	NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>	Aqueous	<input checked="" type="checkbox"/>	df - no2/no3	1
1503226-031C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1503226-032A	TW4-19_03092015	3/9/2015 1200h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-032B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-032C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1503226-033A	TW4-22_03092015	3/9/2015 1336h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-033B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-033C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1503226-034A	TW4-20_03092015	3/9/2015 1350h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-034B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-034C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1503226-035A	TW4-65_03112015	3/11/2015 0810h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-035B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-035C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1503226-036A	TW4-70_03122015	3/12/2015 0728h	3/13/2015 1015h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	<input checked="" type="checkbox"/>	df - wc	1
1503226-036B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3	
1503226-036C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		<input checked="" type="checkbox"/>	VOCFridge	3
1503226-037A	Trip Blank	3/9/2015	3/13/2015 1015h	8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3



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 www.awal-labs.com

CHAIN OF CUSTODY

All analysts will be conducted using NELAP accredited methods and all data will be reported using AWAL's standard analyte lists and reporting limits (PQL) unless specifically requested otherwise on this Chain of Custody and/or attached documentation.

1503226
 AWAL Lab Sample Set #
 Page 1 of 3

Client: **Energy Fuels Resources, Inc.**
 Address: **6425 S. Hwy. 191**
Blanding, UT 84511
 Contact: **Garrin Palmer**
 Phone #: **(435) 678-2221** Cell #:
 Email: **gpalmer@energyfuels.com; kweincl@energyfuels.com; dturk@energyfuels.com**
 Project Name: **1st Quarter Chloroform 2015**
 Project #:
 PO #:
 Sampler Name: **Tanner Holliday**

QC Level:		Turn Around Time:		Unless other arrangements have been made, signed reports will be emailed by 5:00 pm on the day they are due.		Due Date:				
3		Standard								
Sample ID	Date Sampled	Time Sampled	# of Containers	Sample Matrix	NO2/NO3 (353.2)	Cl (4500 or 300.0)	VOCs (8260C)	Known Hazards & Sample Comments	Laboratory Use Only	
									1	2
1 TW4-03R_03102015	3/10/2015	755	5	W	X	X	X			Samples Were: Field X 1 Shipped or hand delivered 2 Ambient or Chilled 3 Temperature 2.9 °C 4 Received Broken/Leaking (Improperly Sealed) Y N 5 Properly Preserved Y N Checked at bench Y N 6 Received Within Holding Times Y N
2 TW4-03_03112015	3/11/2015	746	5	W	X	X	X			
3 TW4-12_03112015	3/11/2015	757	5	W	X	X	X			
4 TW4-28_03112015	3/11/2015	804	5	W	X	X	X			
5 TW4-32_03112015	3/11/2015	810	5	W	X	X	X			
6 TW4-13_03112015	3/11/2015	817	5	W	X	X	X			
7 TW4-36_03112015	3/11/2015	823	5	W	X	X	X			
8 TW4-27_03112015	3/11/2015	830	5	W	X	X	X			
9 TW4-30_03112015	3/11/2015	835	5	W	X	X	X			
10 TW4-31_03112015	3/11/2015	841	5	W	X	X	X			
11 TW4-34_03112015	3/11/2015	847	5	W	X	X	X			
12 TW4-35_03112015	3/11/2015	853	5	W	X	X	X			
13 TW4-23_03122015	3/12/2015	703	5	W	X	X	X			

Sample ID	Date Sampled	Time Sampled	# of Containers	Sample Matrix	NO2/NO3 (353.2)	Cl (4500 or 300.0)	VOCs (8260C)	Known Hazards & Sample Comments
1 TW4-03R_03102015	3/10/2015	755	5	W	X	X	X	
2 TW4-03_03112015	3/11/2015	746	5	W	X	X	X	
3 TW4-12_03112015	3/11/2015	757	5	W	X	X	X	
4 TW4-28_03112015	3/11/2015	804	5	W	X	X	X	
5 TW4-32_03112015	3/11/2015	810	5	W	X	X	X	
6 TW4-13_03112015	3/11/2015	817	5	W	X	X	X	
7 TW4-36_03112015	3/11/2015	823	5	W	X	X	X	
8 TW4-27_03112015	3/11/2015	830	5	W	X	X	X	
9 TW4-30_03112015	3/11/2015	835	5	W	X	X	X	
10 TW4-31_03112015	3/11/2015	841	5	W	X	X	X	
11 TW4-34_03112015	3/11/2015	847	5	W	X	X	X	
12 TW4-35_03112015	3/11/2015	853	5	W	X	X	X	
13 TW4-23_03122015	3/12/2015	703	5	W	X	X	X	

Relinquished by: <i>Garrin Palmer</i> Signature	Date: <i>3/12/15</i>	Received by: <i>[Signature]</i> Signature	Date:	Special Instructions: See the Analytical Scope of Work for Reporting Limits and VOC analyte list.
Print Name: <i>Garrin Palmer</i>	Time: <i>1200</i>	Print Name:	Time:	
Relinquished by: <i>[Signature]</i> Signature	Date:	Received by: <i>[Signature]</i> Signature	Date: <i>3/12/15</i>	
Print Name:	Time:	Print Name: <i>[Signature]</i>	Time: <i>1015</i>	
Relinquished by: <i>[Signature]</i> Signature	Date:	Received by: <i>[Signature]</i> Signature	Date:	



**American West
Analytical Laboratories**

463 W. 3600 S. Salt Lake City, UT 84115
 Phone # (801) 263-8686 Toll Free # (888) 263-8686
 Fax # (801) 263-8687 Email awal@awal-labs.com
 www.awal-labs.com

CHAIN OF CUSTODY

All analysis will be conducted using NELAP accredited methods and all data will be reported using AWAL's standard analyte lists and reporting limits (PQL) unless specifically requested otherwise on this Chain of Custody and/or attached documentation.

AWAL Lab Sample Set #
 Page 2 of 3

Client: **Energy Fuels Resources, Inc.**
 Address: **6425 S. Hwy. 191
 Blanding, UT 84511**
 Contact: **Garrin Palmer**
 Phone #: **(435) 678-2221** Cell #:
 Email: **gpalmer@energyfuels.com; KWeino@energyfuels.com;
 dtark@energyfuels.com**
 Project Name: **1st Quarter Chloroform 2015**
 Project #:
 PO #:
 Sampler Name: **Tanner Holliday**

QC Level:	Turn Around Time:	Unless other arrangements have been made, signed reports will be emailed by 5:00 pm on the day they are due.		Due Date:																			
3	Standard																						
# of Containers	Sample Matrix	NO2/NO3 (353 Z)	Cl (4500 or 300.0)	VOCs (8260C)																	Laboratory Use Only		
																					X Include EDD: LOCUS UPLOAD EXCEL Field Filtered For:		Samples Were:
		For Compliance With:		Known Hazards & Sample Comments																CDC Type Was:			
14																						1 Shipped or hand delivered	
15																						2 Ambient or Chilled	
16																						3 Temperature 2.9 C	
17																						4 Received Broken/Leaking (Improperly Sealed)	
18																						5 Properly Preserved	
19																						6 Checked at bench	
20																						7 Received Within Holding Times	
21																						8 Present on Outer Package	
22																						9 Unbroken on Outer Package	
23																						10 Present on Sample	
24																						11 Unbroken on Sample	
25																						Discrepancies Between Sample Labels and CDC Records?	
26																							
27																							
28																							
29																							
30																							

Sample ID:	Date Sampled	Time Sampled	# of Containers	Sample Matrix	NO2/NO3 (353 Z)	Cl (4500 or 300.0)	VOCs (8260C)															
TW4-25_03092015	3/9/2015	1300	5	W	X	X	X															
TW4-14_03122015	3/12/2015	712	5	W	X	X	X															
TW4-26_03122015	3/12/2015	720	5	W	X	X	X															
TW4-05_03122015	3/12/2015	728	5	W	X	X	X															
TW4-24_03092015	3/9/2015	1326	5	W	X	X	X															
TW4-18_03122015	3/12/2015	738	5	W	X	X	X															
TW4-09_03122015	3/12/2015	747	5	W	X	X	X															
TW4-33_03122015	3/12/2015	755	5	W	X	X	X															
TW4-08_03122015	3/12/2015	803	5	W	X	X	X															
TW4-21_03122015	3/12/2015	811	5	W	X	X	X															
TW4-29_03122015	3/12/2015	821	5	W	X	X	X															
TW4-16_03122015	3/12/2015	830	5	W	X	X	X															
TW4-11_03092015	3/9/2015	1408	5	W	X	X	X															

Relinquished by: Signature: <i>Garrin Palmer</i>	Date: 3/12/15	Received by: Signature: <i>Elmer Hays</i>	Date: 3-12-15	Special Instructions: See the Analytical Scope of Work for Reporting Limits and VOC analyte list.
Print Name: Garrin Palmer	Time: 1200	Print Name: Elmer Hays	Time: 1015	
Relinquished by: Signature:	Date:	Received by: Signature:	Date:	
Print Name:	Time:	Print Name:	Time:	
Relinquished by: Signature:	Date:	Received by: Signature:	Date:	
Print Name:	Time:	Print Name:	Time:	
Relinquished by: Signature:	Date:	Received by: Signature:	Date:	
Print Name:	Time:	Print Name:	Time:	
Relinquished by: Signature:	Date:	Received by: Signature:	Date:	
Print Name:	Time:	Print Name:	Time:	



**American West
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CHAIN OF CUSTODY

All analysis will be conducted using NELAP accredited methods and all data will be reported using AWAL's standard analyte lists and reporting limits (PQL) unless specifically requested otherwise on this Chain of Custody and/or attached documentation.

AWAL Lab Sample Set #

Page 3 of 3

Client: **Energy Fuels Resources, Inc.**
Address: **6425 S. Hwy. 191**
Blanding, UT 84511
Contact: **Garrin Palmer**
Phone #: **(435) 678-2221** Cell #: _____
Email: gpalmer@energyfuels.com; kwelno@energyfuels.com; dturk@energyfuels.com
Project Name: **1st Quarter Chloroform 2015**
Project #: _____
PO #: _____
Sampler Name: **Tanner Holliday**

QC Level:	Turn Around Time:	Unless other arrangements have been made, signed reports will be emailed by 5:00 pm on the day they are due.	Date:												
3	Standard														
		<input checked="" type="checkbox"/> Include EDD: LOCUS UPLOAD EXCEL Field Filtered For:	Laboratory Use Only Samples Were: Fed X 1. Received and delivered <input checked="" type="checkbox"/> Y 2. Analyte(s) of interest <input checked="" type="checkbox"/> Y 3. Temperature 29 °C <input checked="" type="checkbox"/> Y 4. Received by MAIL, sealed, (improperly sealed) <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N 5. Property Preserved <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N 6. Received Within Holding Times <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N												
		For Compliance With: <input type="checkbox"/> NELAP <input type="checkbox"/> RCRA <input type="checkbox"/> CWA <input type="checkbox"/> SDWA <input type="checkbox"/> ELAP / A2LA <input type="checkbox"/> NLLAP <input type="checkbox"/> Non-Compliance <input type="checkbox"/> Other:													
		Known Hazards & Sample Comments	DOC Tape Was: 1. Present on Outer Package <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> NA 2. Undisturbed on Outer Package <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> NA 3. Present on Sample <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> NA 4. Undisturbed on Sample <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> NA Discrepancies Between Sample Labels and DOC Record? <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N												
Sample ID:	Date Sampled	Time Sampled	# of Containers	Sample Matrix	PD2/NO3 (553.2)	Cl (4500 or 300.0)	VOCs (8260C)								
27 TW4-04_03092015	3/9/2015	1453	5	W	X	X	X								
28 TW4-01_03092015	3/9/2015	1443	5	W	X	X	X								
29 MW-04_03092015	3/9/2015	1437	5	W	X	X	X								
30 MW-26_03092015	3/9/2015	1400	5	W	X	X	X								
31 TW4-02_03092015	3/9/2015	1427	5	W	X	X	X								
32 TW4-19_03092015	3/9/2015	1200	5	W	X	X	X								
33 TW4-22_03092015	3/9/2015	1336	5	W	X	X	X								
34 TW4-20_03092015	3/9/2015	1350	5	W	X	X	X								
35 TW4-65_03112015	3/11/2015	810	5	W	X	X	X								
36 TW4-70_03122015	3/12/2015	728	5	W	X	X	X								
37 Trip Blank	3/9/2015		3	W			X								
11 Temp Blank															
12															

Relinquished by: <i>Garrin Palmer</i> Signature: _____ Print Name: Garrin Palmer	Date: 3/12/15 Time: 1200	Received by: <i>E. Lisa Holliday</i> Signature: _____ Print Name: E. Lisa Holliday	Date: 3-12-15 Time: 1015	Special Instructions: See the Analytical Scope of Work for Reporting Limits and VOC analyte list.
Relinquished by: _____ Signature: _____ Print Name: _____	Date: _____ Time: _____	Received by: _____ Signature: _____ Print Name: _____	Date: _____ Time: _____	
Relinquished by: _____ Signature: _____ Print Name: _____	Date: _____ Time: _____	Received by: _____ Signature: _____ Print Name: _____	Date: _____ Time: _____	
Relinquished by: _____ Signature: _____ Print Name: _____	Date: _____ Time: _____	Received by: _____ Signature: _____ Print Name: _____	Date: _____ Time: _____	



Garrin Palmer
Energy Fuels Resources, Inc.
6425 S. Hwy 191
Blanding, UT 84511
TEL: (435) 678-2221

RE: 1st Quarter Chloroform 2015

Dear Garrin Palmer:

Lab Set ID: 1503326

3440 South 700 West
Salt Lake City, UT 84119

American West Analytical Laboratories received 7 sample(s) on 3/19/2015 for the analyses presented in the following report.

Phone: (801) 263-8686
Toll Free: (888) 263-8686
Fax: (801) 263-8687
e-mail: awal@awal-labs.com
web: www.awal-labs.com

American West Analytical Laboratories (AWAL) is accredited by The National Environmental Laboratory Accreditation Program (NELAP) in Utah and Texas; and is state accredited in Colorado, Idaho, New Mexico, and Missouri.

All analyses were performed in accordance to the NELAP protocols unless noted otherwise. Accreditation scope documents are available upon request. If you have any questions or concerns regarding this report please feel free to call.

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

The abbreviation "Surr" found in organic reports indicates a surrogate compound that is intentionally added by the laboratory to determine sample injection, extraction, and/or purging efficiency. The "Reporting Limit" found on the report is equivalent to the practical quantitation limit (PQL). This is the minimum concentration that can be reported by the method referenced and the sample matrix. The reporting limit must not be confused with any regulatory limit. Analytical results are reported to three significant figures for quality control and calculation purposes.

Thank You,

Kyle F. Gross
Digitally signed by Kyle F. Gross
DN: cn=Kyle F. Gross, o=AWAL,
ou=AWAL, email=kyle@awal-
labs.com, c=US
Date: 2015.03.31 11:55:37 -06'00'

Approved by:

Laboratory Director or designee



SAMPLE SUMMARY

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Chloroform 2015
Lab Set ID: 1503326
Date Received: 3/19/2015 945h

3440 South 700 West Salt Lake City, UT 84119	Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
	1503326-001A	TW4-06R_03172015	3/17/2015 930h	Aqueous	Anions, E300.0
	1503326-001B	TW4-06R_03172015	3/17/2015 930h	Aqueous	Nitrite/Nitrate (as N), E353.2
	1503326-001C	TW4-06R_03172015	3/17/2015 930h	Aqueous	VOA by GC/MS Method 8260C/5030C
Phone: (801) 263-8686	1503326-002A	MW-32_03172015	3/17/2015 1400h	Aqueous	Anions, E300.0
Toll Free: (888) 263-8686	1503326-002B	MW-32_03172015	3/17/2015 1400h	Aqueous	Nitrite/Nitrate (as N), E353.2
Fax: (801) 263-8687	1503326-002C	MW-32_03172015	3/17/2015 1400h	Aqueous	VOA by GC/MS Method 8260C/5030C
e-mail: awal@awal-labs.com	1503326-003A	TW4-06_03182015	3/18/2015 757h	Aqueous	Anions, E300.0
	1503326-003B	TW4-06_03182015	3/18/2015 757h	Aqueous	Nitrite/Nitrate (as N), E353.2
web: www.awal-labs.com	1503326-003C	TW4-06_03182015	3/18/2015 757h	Aqueous	VOA by GC/MS Method 8260C/5030C
	1503326-004A	TW4-07_03182015	3/18/2015 805h	Aqueous	Anions, E300.0
Kyle F. Gross	1503326-004B	TW4-07_03182015	3/18/2015 805h	Aqueous	Nitrite/Nitrate (as N), E353.2
Laboratory Director	1503326-004C	TW4-07_03182015	3/18/2015 805h	Aqueous	VOA by GC/MS Method 8260C/5030C
	1503326-005A	TW4-10_03182015	3/18/2015 812h	Aqueous	Anions, E300.0
Jose Rocha	1503326-005B	TW4-10_03182015	3/18/2015 812h	Aqueous	Nitrite/Nitrate (as N), E353.2
QA Officer	1503326-005C	TW4-10_03182015	3/18/2015 812h	Aqueous	VOA by GC/MS Method 8260C/5030C
	1503326-006A	TW4-60_03172015	3/17/2015 855h	Aqueous	Anions, E300.0
	1503326-006B	TW4-60_03172015	3/17/2015 855h	Aqueous	Nitrite/Nitrate (as N), E353.2
	1503326-006C	TW4-60_03172015	3/17/2015 855h	Aqueous	VOA by GC/MS Method 8260C/5030C
	1503326-007A	Trip Blank	3/17/2015	Aqueous	VOA by GC/MS Method 8260C/5030C



Inorganic Case Narrative

Client: Energy Fuels Resources, Inc.
Contact: Garrin Palmer
Project: 1st Quarter Chloroform 2015
Lab Set ID: 1503326

3440 South 700 West
Salt Lake City, UT 84119

Phone: (801) 263-8686
Toll Free: (888) 263-8686
Fax: (801) 263-8687
e-mail: awal@awal-labs.com

web: www.awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Sample Receipt Information:

Date of Receipt: 3/19/2015
Date(s) of Collection: 3/17 – 3/19/2015
Sample Condition: Intact
C-O-C Discrepancies: None

Holding Time and Preservation Requirements: The analysis and preparation for the samples were performed within the method holding times. The samples were properly preserved.

Preparation and Analysis Requirements: The samples were analyzed following the methods stated on the analytical reports.

Analytical QC Requirements: All instrument calibration and calibration check requirements were met. All internal standard recoveries met method criterion.

Batch QC Requirements: MB, LCS, MS, MSD, RPD:

Method Blanks (MB): No target analytes were detected above reporting limits, indicating that the procedure was free from contamination.

Laboratory Control Samples (LCS): All LCS recoveries were within control limits, indicating that the preparation and analysis were in control.

Matrix Spike / Matrix Spike Duplicates (MS/MSD): All percent recoveries and RPDs (Relative Percent Differences) were inside established limits, with the following exceptions:

Sample ID	Analyte	QC	Explanation
1503326-001B	Nitrate-Nitrite (as N)	MSD	Sample matrix interference

Corrective Action: None required.



Volatile Case Narrative

Client: Energy Fuels Resources, Inc.
Contact: Garrin Palmer
Project: 1st Quarter Chloroform 2015
Lab Set ID: 1503326

3440 South 700 West
Salt Lake City, UT 84119

Phone: (801) 263-8686
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Fax: (801) 263-8687
e-mail: awal@awal-labs.com

web: www.awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Sample Receipt Information:

Date of Receipt: 3/19/2015
Date(s) of Collection: 3/17 – 3/19/2015
Sample Condition: Intact
C-O-C Discrepancies: None
Method: SW-846 8260C/5030C
Analysis: Volatile Organic Compounds

General Set Comments: Multiple target analytes were observed above reporting limits.

Holding Time and Preservation Requirements: All samples were received in appropriate containers and properly preserved. The analysis and preparation of all samples were performed within the method holding times following the methods stated on the analytical reports.

Analytical QC Requirements: All instrument calibration and calibration check requirements were met. All internal standard recoveries met method criterion.

Batch QC Requirements: MB, LCS, MS, MSD, RPD, and Surrogates:

Method Blanks (MBs): No target analytes were detected above reporting limits, indicating that the procedure was free from contamination.

Laboratory Control Sample (LCS): All LCS recoveries were within control limits, indicating that the preparation and analysis were in control.

Matrix Spike / Matrix Spike Duplicates (MS/MSD): All percent recoveries and RPDs (Relative Percent Differences) were inside established limits, indicating no apparent matrix interferences.

Surrogates: All surrogate recoveries were within established limits.

Corrective Action: None required.



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1503326
Project: 1st Quarter Chloroform 2015

Contact: Garrin Palmer
Dept: WC
QC Type: LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: LCS-R76798 Date Analyzed: 03/19/2015 1755h													
Test Code: 300.0-W													
Chloride	4.87	mg/L	E300.0	0.00751	0.100	5.000	0	97.4	90 - 110				
Lab Sample ID: LCS NO3-R77035 Date Analyzed: 03/27/2015 1732h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	1.05	mg/L	E353.2	0.00833	0.0100	1.000	0	105	90 - 110				



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.

Lab Set ID: 1503326

Project: 1st Quarter Chloroform 2015

Contact: Garrin Palmer

Dept: WC

QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB-R76798													
Date Analyzed:		03/19/2015 1738h											
Test Code:		300.0-W											
Chloride	< 0.100	mg/L	E300.0	0.00751	0.100								
Lab Sample ID: MB-R77035													
Date Analyzed:		03/27/2015 1729h											
Test Code:		NO2/NO3-W-353.2											
Nitrate/Nitrite (as N)	< 0.0100	mg/L	E353.2	0.00833	0.0100								



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Salt Lake City, UT 84119

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e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.

Lab Set ID: 1503326

Project: 1st Quarter Chloroform 2015

Contact: Garrin Palmer

Dept: WC

QC Type: MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1503326-002AMS Date Analyzed: 03/19/2015 2134h													
Test Code: 300.0-W													
Chloride	84.9	mg/L	E300.0	0.0751	1.00	50.00	36.3	97.3	90 - 110				
Lab Sample ID: 1503326-001BMS NO3 Date Analyzed: 03/27/2015 1847h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	1.06	mg/L	E353.2	0.00833	0.0100	1.000	0	106	90 - 110				



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1503326
Project: 1st Quarter Chloroform 2015

Contact: Garrin Palmer
Dept: WC
QC Type: MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1503326-002AMSD		Date Analyzed: 03/19/2015 2151h											
Test Code: 300.0-W													
Chloride	84.2	mg/L	E300.0	0.0751	1.00	50.00	36.3	95.7	90 - 110	84.9	0.905	20	
Lab Sample ID: 1503326-001BMSD NO3		Date Analyzed: 03/27/2015 1849h											
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	1.11	mg/L	E353.2	0.00833	0.0100	1.000	0	111	90 - 110	1.06	4.53	10	#

¹ - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.

American West Analytical Laboratories

UL
Denison

WORK ORDER Summary

Work Order: **1503326**

Page 1 of 2

Client: Energy Fuels Resources, Inc.

Due Date: 3/30/2015

Client ID: DEN100

Contact: Garrin Palmer

Project: 1st Quarter Chloroform 2015

QC Level: III

WO Type: Project

Comments: PA Rush. QC 3 (Summary/No chromatograms). RL of 1 ppm for Chloride and VOC and 0.1 ppm for NO2/NO3. Expected levels provided by client - see Jenn. J-flag what we can't meet. EIM Locus and EDD-Denison. Email Group.;

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage
1503326-001A	TW4-06R_03172015	3/17/2015 0930h	3/19/2015 0945h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	df - wc	1
1503326-001B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		df - no2/no3	
1503326-001C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		VOCFridge	3
1503326-002A	MW-32_03172015	3/17/2015 1400h	3/19/2015 0945h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	df - wc	1
1503326-002B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		df - no2/no3	
1503326-002C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		VOCFridge	3
1503326-003A	TW4-06_03182015	3/18/2015 0757h	3/19/2015 0945h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	df - wc	1
1503326-003B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		df - no2/no3	
1503326-003C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		VOCFridge	3
1503326-004A	TW4-07_03182015	3/18/2015 0805h	3/19/2015 0945h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	df - wc	1
1503326-004B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		df - no2/no3	
1503326-004C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		VOCFridge	3
1503326-005A	TW4-10_03182015	3/18/2015 0812h	3/19/2015 0945h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	df - wc	1
1503326-005B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		df - no2/no3	
1503326-005C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		VOCFridge	3

WORK ORDER Summary

Work Order: **1503326** Page 2 of 2

Client: Energy Fuels Resources, Inc.

Due Date: 3/30/2015

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel Storage	
1503326-006A	TW4-60_03172015	3/17/2015 0855h	3/19/2015 0945h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous	df - wc	1
1503326-006B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		df - no2/no3	
1503326-006C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>		VOCFridge	3
1503326-007A	Trip Blank	3/17/2015	3/19/2015 0945h	8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 4 / # of Surr: 4</i>	Aqueous	VOCFridge	3



AMERICAN WEST ANALYTICAL LABORATORIES

463 W. 3600 S. SALT LAKE CITY, UT 84115
 PHONE # (801) 263-8686 TOLL FREE # (888) 263-8686
 FAX # (801) 263-8687 EMAIL AWAL@AWAL-LABS.COM
 WWW.AWAL-LABS.COM

CHAIN OF CUSTODY

ALL ANALYSIS WILL BE CONDUCTED USING NELAP ACCREDITED METHODS AND ALL DATA WILL BE REPORTED USING AWAL'S STANDARD ANALYTE LISTS AND REPORTING LIMITS (PQL) UNLESS SPECIFICALLY REQUESTED OTHERWISE ON THIS CHAIN OF CUSTODY AND/OR ATTACHED DOCUMENTATION.

1503326
 AWAL LAB SAMPLE SET #
 PAGE 1 OF 1

CLIENT: **Energy Fuels Resources, Inc.**
 ADDRESS: **6425 S. Hwy. 191**
Blanding, UT 84511
 CONTACT: **Garrin Palmer**
 PHONE #: **(435) 678-2221** CELL #:
 EMAIL: **gpalmer@energyfuels.com; KWeinl@energyfuels.com;**
dturk@energyfuels.com
 PROJECT NAME: **1st Quarter chloroform 2015**
 PROJECT #:
 PO #:
 SAMPLER NAME: **Tanner Holliday**

QC LEVEL:		TURN AROUND TIME:		UNLESS OTHER ARRANGEMENTS HAVE BEEN MADE, SIGNED REPORTS WILL BE EMAILED BY 5:00 PM ON THE DAY THEY ARE DUE.		DUE DATE:			
3		STANDARD							
# OF CONTAINERS	SAMPLE MATRIX	NO2/NO3 (353.2)	CI (4500 or 300.0)	VOCs (8260C)				X INCLUDE EDD: LOCUS UPLOAD EXCEL FIELD FILTERED FOR: FOR COMPLIANCE WITH: <input type="checkbox"/> NELAP <input type="checkbox"/> RCRA <input type="checkbox"/> CWA <input type="checkbox"/> SDWA <input type="checkbox"/> ELAP / A2LA <input type="checkbox"/> NLLAP <input type="checkbox"/> NON-COMPLIANCE <input type="checkbox"/> OTHER: KNOWN HAZARDS & SAMPLE COMMENTS	LABORATORY USE ONLY SAMPLES WERE: Fed-X 1 SHIPPED OR HAND DELIVERED 2 AMBIENT OR CHILLED 3 TEMPERATURE 34 °C 4 RECEIVED BROKEN/LEAKING (IMPROPERLY SEALED) Y N 5 PROPERLY PRESERVED Y N CHECKED AT BENCH Y N 6 RECEIVED WITHIN HOLDING TIMES Y N
SAMPLE ID:	DATE SAMPLED	TIME SAMPLED							
1	TW4-06R_03172015	3/17/2015	930	5	w	X	X	X	
2	MW-32_03172015	3/17/2015	1400	5	w	X	X	X	
3	TW4-06_03182015	3/18/2015	757	5	w	X	X	X	
4	TW4-07_03182015	3/18/2015	805	5	w	X	X	X	
5	TW4-10_03182015	3/18/2015	812	5	w	X	X	X	
6	TW4-60_03172015	3/17/2015	855	5	w	X	X	X	
7	TRIP BLANK	3/17/2015		3	w			X	
8	TEMP BLANK	3/18/2015		1	w				
9									
10									
11									
12									

RELINQUISHED BY: SIGNATURE: <i>Tanner Holliday</i>	DATE: 3/18/2015	RECEIVED BY: SIGNATURE:	DATE:	SPECIAL INSTRUCTIONS: See the Analytical Scope of Work for Reporting Limits and VOC analyte list.
PRINT NAME: Tanner Holliday	TIME: 1030	PRINT NAME:	TIME:	
RELINQUISHED BY: SIGNATURE:	DATE:	RECEIVED BY: SIGNATURE: <i>Elma H...</i>	DATE: 3-19-15	
PRINT NAME:	TIME:	PRINT NAME: Elma H...	TIME: 945	
RELINQUISHED BY: SIGNATURE:	DATE:	RECEIVED BY: SIGNATURE:	DATE:	
PRINT NAME:	TIME:	PRINT NAME:	TIME:	

Preservation Check Sheet

Sample Set Extension and pH

Analysis	Preservative	1	2	3	4	5	6											
Ammonia	pH <2 H ₂ SO ₄																	
COD	pH <2 H ₂ SO ₄																	
Cyanide	pH >12 NaOH																	
Metals	pH <2 HNO ₃																	
NO ₂ & NO ₃	pH <2 H ₂ SO ₄	yes	yes	yes	yes	yes	yes											
O & G	pH <2 HCL																	
Phenols	pH <2 H ₂ SO ₄																	
Sulfide	pH > 9NaOH, Zn Acetate																	
TKN	pH <2 H ₂ SO ₄																	
T PO ₄	pH <2 H ₂ SO ₄																	

- Procedure:
- 1) Pour a small amount of sample in the sample lid
 - 2) Pour sample from Lid gently over wide range pH paper
 - 3) **Do Not** dip the pH paper in the sample bottle or lid
 - 4) If sample is not preserved, properly list its extension and receiving pH in the appropriate column above
 - 5) Flag COC, notify client if requested
 - 6) Place client conversation on COC
 - 7) Samples may be adjusted

Frequency: All samples requiring preservation

- * The sample required additional preservative upon receipt.
- + The sample was received unpreserved
- ▲ The Sample was received unpreserved and therefore preserved upon receipt.
- # The sample pH was unadjustable to a pH < 2 due to the sample matrix
- The sample pH was unadjustable to a pH > ____ due to the sample matrix interference

Tab H

Quality Assurance and Data Validation Tables

H-1 Field Data QA/QC Evaluation

Location	Casing Volume	2x Casing Volume	Volume Pumped	Volume Check	Conductivity		RPD	pH		RPD	Temp		RPD	Redox Potential		RPD	Turbidity		RPD
Piezometer 1			--		2124		NC	8.93		NC	13.20		NC	193		NC	0.0		NC
Piezometer 2			--		790		NC	6.87		NC	13.34		NC	299		NC	0.0		NC
Piezometer 3			--		2764		NC	11.23		NC	13.25		NC	148		NC	0.0		NC
TWN-1	33.70	67.40	88.00	OK	851.0	853.0	0.23	6.76	6.78	0.30	15.06	15.07	0.07	194	193	0.52	0.0	0.0	0.00
TWN-2	NA	Continuously Pumped Well			2948		NC	6.56		NC	14.71		NC	311		NC	0.0		NC
TWN-3	37.28	74.56	47.60	Pumped Dry	2294.0	2299.0	0.22	6.60	6.59	0.15	13.99	13.99	0.00	NM		NC	NM		NC
TWN-4	47.47	94.94	121.00	OK	1063.0	1063.0	0.00	6.52	6.52	0.00	14.73	14.73	0.00	224	224	0.00	0.0	0.0	0.00
TWN-7	12.47	24.94	16.50	Pumped Dry	1229.0	1237.0	0.65	6.20	6.25	0.80	13.98	14.01	0.21	NM		NC	NM		NC
TWN-18	55.64	111.28	132.00	OK	2250.0	2247.0	0.13	6.16	6.16	0.00	14.54	14.52	0.14	178	178	0.00	0.0	0.0	0.00
TW4-22	NA	Continuously pumped well			6073		NC	6.28		NC	15.25		NC	200		NC	0.0		NC
TW4-24	NA	Continuously pumped well			7593		NC	6.24		NC	15.61		NC	220		NC	0.0		NC
TW4-25	NA	Continuously pumped well			2891		NC	6.56		NC	15.00		NC	149		NC	0.0		NC

NC = Not Calculated

TWN-2 , TW4-22, TW4-24, and TW4-25 are continuously pumping wells.

Piezometers 1, 2, and 3 were not pumped, only one set of parameters were taken.

TWN-3 and TWN-7 were pumped dry and sampled after recovery.

The QAP states that turbidity should be less than 5 Nephelometric Turbidity Units ("NTU") prior to sampling unless the well is characterized by water that has a higher turbidity. The QAP does not require that turbidity measurements be less than 5 NTU prior to sampling. As such, the noted observations regarding turbidity measurements less than 5 NTU below are included for information purposes only.

NM = Not Measured. The QAP does not require the measurement of redox potential or turbidity in wells that were purged to dryness.

H-2: Holding Time Evaluation

Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
PIEZ-01	Chloride	02/18/2015	02/25/2015	7	28	OK
PIEZ-01	Nitrate/Nitrite (as N)	02/18/2015	03/04/2015	14	28	OK
PIEZ-02	Chloride	02/18/2015	02/25/2015	7	28	OK
PIEZ-02	Nitrate/Nitrite (as N)	02/18/2015	03/04/2015	14	28	OK
PIEZ-03	Chloride	02/18/2015	02/25/2015	7	28	OK
PIEZ-03	Nitrate/Nitrite (as N)	02/18/2015	03/04/2015	14	28	OK
TWN-01	Chloride	02/18/2015	02/25/2015	7	28	OK
TWN-01	Nitrate/Nitrite (as N)	02/18/2015	03/04/2015	14	28	OK
TWN-02	Chloride	02/18/2015	02/25/2015	7	28	OK
TWN-02	Nitrate/Nitrite (as N)	02/18/2015	03/04/2015	14	28	OK
TWN-03	Chloride	02/19/2015	02/25/2015	6	28	OK
TWN-03	Nitrate/Nitrite (as N)	02/19/2015	03/04/2015	13	28	OK
TWN-04	Chloride	02/18/2015	02/25/2015	7	28	OK
TWN-04	Nitrate/Nitrite (as N)	02/18/2015	03/04/2015	14	28	OK
TWN-07	Chloride	02/19/2015	02/25/2015	6	28	OK
TWN-07	Nitrate/Nitrite (as N)	02/19/2015	03/04/2015	13	28	OK
TWN-07R	Chloride	02/18/2015	02/25/2015	7	28	OK
TWN-07R	Nitrate/Nitrite (as N)	02/18/2015	03/04/2015	14	28	OK
TWN-18	Chloride	02/18/2015	02/25/2015	7	28	OK
TWN-18	Nitrate/Nitrite (as N)	02/18/2015	03/04/2015	14	28	OK
TW4-22	Chloride	03/09/2015	03/17/2015	8	28	OK
TW4-22	Nitrate/Nitrite (as N)	03/09/2015	03/20/2015	11	28	OK
TW4-24	Chloride	03/09/2015	03/17/2015	8	28	OK
TW4-24	Nitrate/Nitrite (as N)	03/09/2015	03/20/2015	11	28	OK
TW4-25	Chloride	03/09/2015	03/17/2015	8	28	OK
TW4-25	Nitrate/Nitrite (as N)	03/09/2015	03/20/2015	11	28	OK
TW4-60	Chloride	03/17/2015	03/19/2015	2	28	OK
TW4-60	Nitrate/Nitrite (as N)	03/17/2015	03/27/2015	10	28	OK
TWN-60	Chloride	02/19/2015	02/25/2015	6	28	OK
TWN-60	Nitrate/Nitrite (as N)	02/19/2015	03/04/2015	13	28	OK
TWN-65	Chloride	02/18/2015	02/25/2015	7	28	OK
TWN-65	Nitrate/Nitrite (as N)	02/18/2015	03/04/2015	14	28	OK

H-3: Analytical Method Check

Parameter	Method	Method Used by Lab
Nitrate	E353.1 or E353.2	E353.2
Chloride	A4500-Cl B or A4500-Cl E or E300.0	E300.0

Both Nitrate and Chloride were analyzed with the correct analytical method.

H-4 Reporting Limit Check

Location	Analyte	Lab Reporting Limit	Units	Qualifier	Required Reporting Limit	RL Check	Dilution Factor
PIEZ-01	Chloride	10	mg/L		1	OK	10
PIEZ-01	Nitrate/Nitrite (as N)	0.1	mg/L		0.1	OK	10
PIEZ-02	Chloride	10	mg/L		1	OK	10
PIEZ-02	Nitrate/Nitrite (as N)	0.01	mg/L		0.1	OK	1
PIEZ-03	Chloride	10	mg/L		1	OK	10
PIEZ-03	Nitrate/Nitrite (as N)	0.01	mg/L		0.1	OK	1
TWN-01	Chloride	10	mg/L		1	OK	10
TWN-01	Nitrate/Nitrite (as N)	0.01	mg/L		0.1	OK	1
TWN-02	Chloride	10	mg/L		1	OK	10
TWN-02	Nitrate/Nitrite (as N)	1	mg/L		0.1	OK	100
TWN-03	Chloride	100	mg/L		1	OK	100
TWN-03	Nitrate/Nitrite (as N)	0.1	mg/L		0.1	OK	10
TWN-04	Chloride	10	mg/L		1	OK	10
TWN-04	Nitrate/Nitrite (as N)	0.01	mg/L		0.1	OK	1
TWN-07	Chloride	1	mg/L		1	OK	1
TWN-07	Nitrate/Nitrite (as N)	0.01	mg/L		0.1	OK	1
TWN-07R	Chloride	1	mg/L	U	1	OK	1
TWN-07R	Nitrate/Nitrite (as N)	0.1	mg/L	U	0.1	OK	1
TWN-18	Chloride	10	mg/L		1	OK	10
TWN-18	Nitrate/Nitrite (as N)	0.01	mg/L		0.1	OK	1
TW4-22	Chloride	100	mg/L		1	OK	100
TW4-22	Nitrate/Nitrite (as N)	10	mg/L		0.1	OK	100
TW4-24	Chloride	100	mg/L		1	OK	100
TW4-24	Nitrate/Nitrite (as N)	10	mg/L		0.1	OK	100
TW4-25	Chloride	100	mg/L		1	OK	100
TW4-25	Nitrate/Nitrite (as N)	1	mg/L		0.1	OK	10
TW4-60	Chloride	1	mg/L	U	1	OK	1
TW4-60	Nitrate/Nitrite (as N)	0.1	mg/L	U	0.1	OK	1
TWN-60	Chloride	1	mg/L	U	1	OK	1
TWN-60	Nitrate/Nitrite (as N)	0.1	mg/L	U	0.1	OK	1
TWN-65	Chloride	10	mg/L		1	OK	10
TWN-65	Nitrate/Nitrite (as N)	0.01	mg/L		0.1	OK	1

U = Value was reported by the laboratory as nondetect.

H-5 QA/QC Evaluation for Sample Duplicates

Constituent	TWN-01	TWN-65	%RPD
Chloride	27.8	29	4.23
Nitrogen	1.37	1.41	2.88

H-6 QC Control Limits for Analysis and Blanks

Method Blank Detections

All Method Blanks for the quarter were non-detect.

Matrix Spike % Recovery Comparison

Lab Report	Lab Sample ID	Well	Analyte	MS %REC	MSD %REC	REC Range	RPD
1502347	1502347-011BMS	Piez-03	Nitrate	1150	1060	90-110	7.00
1502347	1502347-001BMS	TWN-07	Nitrate	200	140	90-110	21.8
1503226	1503226-021BMS	TW4-33	Nitrate	132	132	90-110	0.0929
1503226	1503226-032BMS	TW4-19	Nitrate	94	114	90-110	2.12
1503326	1503326-001BMS	TW4-06R	Nitrate	106	111	90-110	4.53

* - Recovery was not calculated because the analyte of the sample was greater than 4 times the spike amount

N/A - QC was not performed on an EFRI sample.

NC - Not calculated

Laboratory Control Sample

All Laboratory Control Samples were within acceptance limits for the quarter.

H-7 Receipt Temperature Evaluation

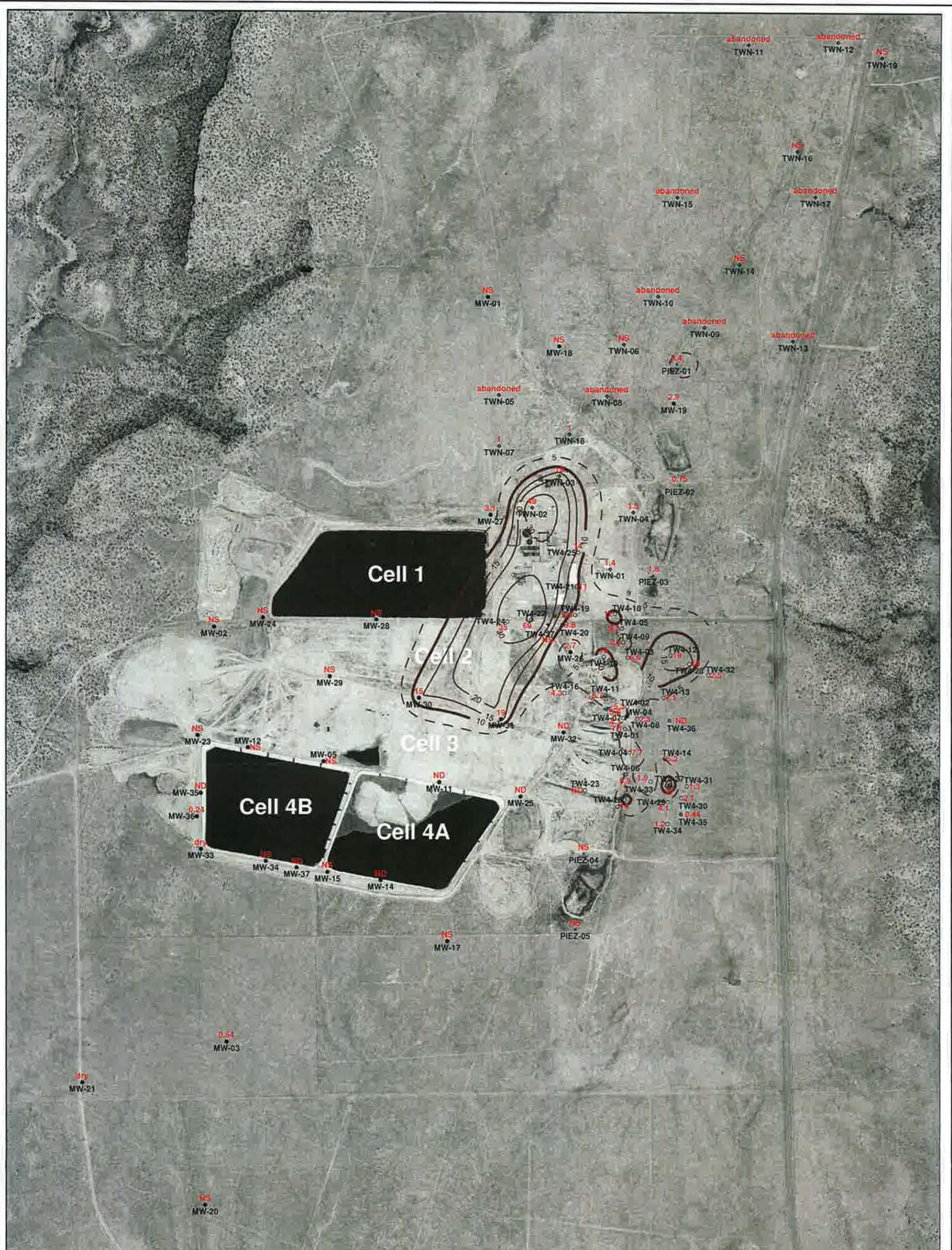
Sample Batch	Wells in Batch	Temperature
1502347	Piezometer 1, Piezometer 2, Piezometer 3, TWN-1, TWN-2, TWN-3, TWN-4, TWN-7, TWN-07R, TWN-18, TWN-60, TWN-65	2.2 °C
1503226	TW4-22, TW4-24, TW4-25, TW4-60	2.9 °C
1503326	TW4-60	3.4 °C

H-8 Rinsate Evaluation

All rinsate and DI blank samples were non-detect for the quarter.

Tab I

Kriged Current Quarter Isoconcentration Maps



EXPLANATION

NS = not sampled; ND = not detected

- 10 kriged nitrate isocon and label
- TW4-37 temporary perched monitoring well installed March, 2015 (not sampled)
- MW-4 perched monitoring well showing concentration in mg/L
- TW4-7 temporary perched monitoring well showing concentration in mg/L
- TWN-1 temporary perched nitrate monitoring well showing concentration in mg/L
- PIEZ-1 perched piezometer showing concentration in mg/L
- TW4-35 temporary perched monitoring well installed May, 2014 showing concentration in mg/L

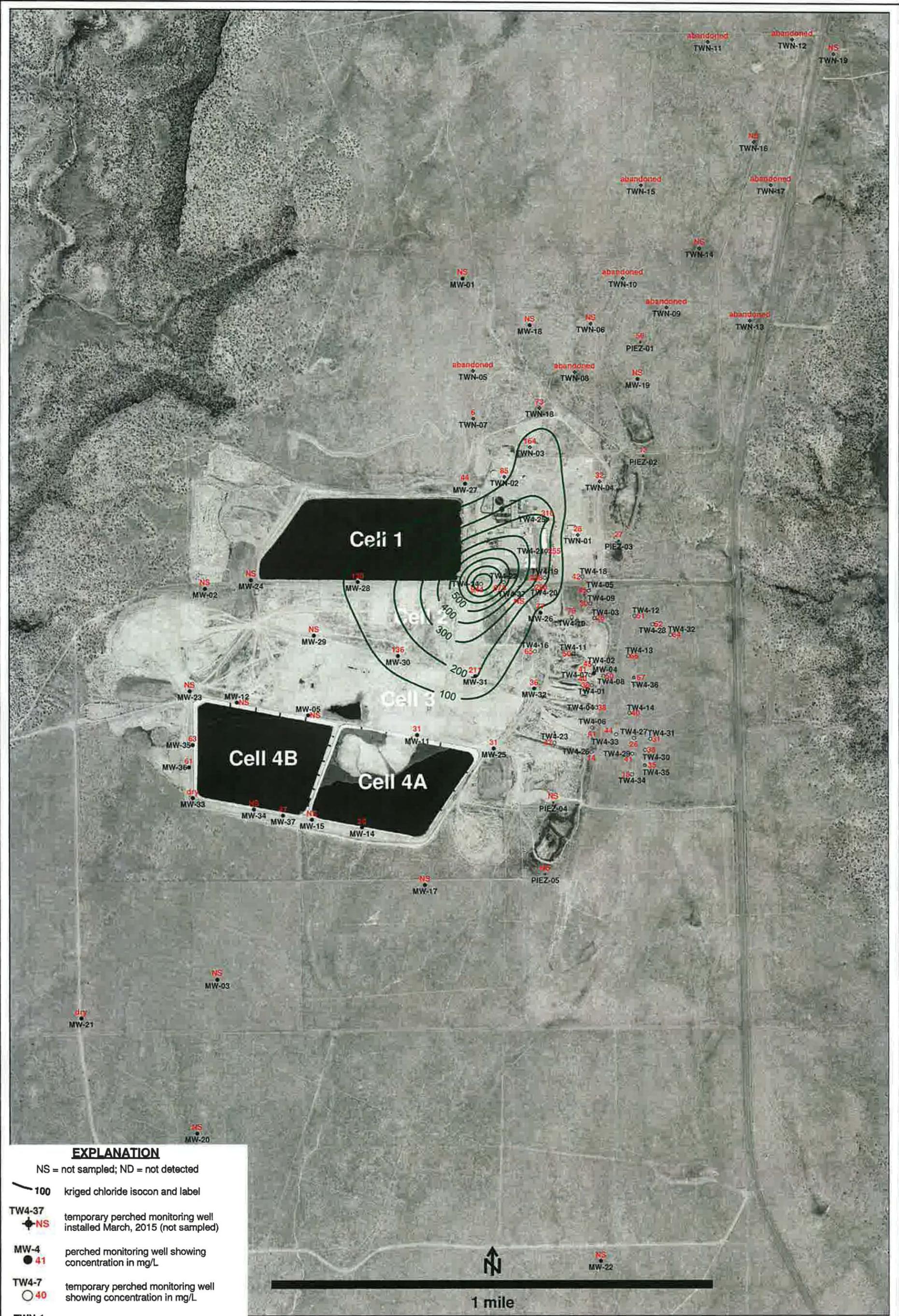
NOTE: MW-4, MW-26, TW4-1, TW4-2, TW4-4, TW4-11, TW4-19, and TW4-20 are chloroform pumping wells; TW4-22, TW4-24, TW4-25, and TWN-2 are nitrate pumping wells



**HYDRO
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CHEM, INC.**

**KRIGED 1st QUARTER, 2015 NITRATE (mg/L)
(NITRATE + NITRITE AS N)
WHITE MESA SITE**

APPROVED	DATE	REFERENCE	FIGURE
		H:/718000/may15/nitrate/Unt0315_rev.srf	I - 1



EXPLANATION

- NS = not sampled; ND = not detected
- 100 kriged chloride isocon and label
- TW4-37 temporary perched monitoring well installed March, 2015 (not sampled)
- MW-4 perched monitoring well showing concentration in mg/L
- TW4-7 temporary perched monitoring well showing concentration in mg/L
- TWN-1 temporary perched nitrate monitoring well showing concentration in mg/L
- PIEZ-1 perched piezometer showing concentration in mg/L
- TW4-36 temporary perched monitoring well installed May, 2014 showing concentration in mg/L

NOTE: MW-4, MW-26, TW4-1, TW4-2, TW4-4, TW4-11, TW4-19, and TW4-20 are chloroform pumping wells; TW4-22, TW4-24, TW4-25, and TWN-2 are nitrate pumping wells



**HYDRO
GEO
CHEM, INC.**

**KRIGED 1st QUARTER, 2015 CHLORIDE (mg/L)
WHITE MESA SITE**

APPROVED	DATE	REFERENCE	FIGURE
		H:/718000/may15/chloride/Ucl0315_rev.srf	I - 2

Tab J

Analyte Concentrations Over Time

Piezometer 1

Date	Nitrate (mg/l)	Chloride (mg/l)
2/19/2009	6.8	NA
7/14/2009	6.8	60
9/22/2009	7.3	78
10/27/2009	7.4	61
6/2/2010	7.2	52
7/19/2010	6.8	52
12/10/2010	6.5	60
1/31/2011	7	60
4/25/2011	6.8	58
7/25/2011	7	53
10/19/2011	6.6	55
1/11/2012	7.1	78
4/20/2012	6.6	58
7/27/2012	7.2	56
10/17/2012	7.66	55
2/18/2013	8.11	56.7
4/24/2013	8.88	53.3
8/28/2013	7.83	55.1
10/16/2013	6.68	54.1
1/13/2014	6.79	56.2
5/7/2014	7.57	52.1
8/6/2014	5.1	55
10/8/2014	5.75	57.6
2/18/2015	6.41	55.9

Piezometer 2

Date	Nitrate (mg/l)	Chloride (mg/l)
2/19/2009	0.5	NA
7/14/2009	0.5	7
9/22/2009	0.5	17
10/27/2009	0.6	7
6/2/2010	0.6	8
7/19/2010	0.6	8
12/10/2010	0.2	6
1/31/2011	0.3	9
4/25/2011	0.3	8
7/25/2011	0.1	9
10/19/2011	0.1	8
1/11/2012	0.1	9
4/20/2012	0.2	8
7/27/2012	0.2	9
10/17/2012	0.192	9.5
2/19/2013	0.218	9.67
4/24/2013	0.172	10.3
8/28/2013	0.198	9.66
10/16/2013	0.364	9.22
1/13/2014	0.169	11.4
5/7/2014	0.736	11.4
8/6/2014	0.8	12
10/8/2014	0.755	12.2
2/18/2015	0.749	12.6

Piezometer 3

Date	Nitrate (mg/l)	Chloride (mg/l)
2/19/2009	0.7	NA
7/14/2009	0.8	12
9/22/2009	0.8	24
10/27/2009	1.2	19
3/24/2010	1.7	116
6/2/2010	1.6	36
7/19/2010	1.6	35
12/10/2010	1.8	25
1/31/2011	1.8	40
4/25/2011	1.7	35
7/25/2011	1.8	61
10/19/2011	1.7	12
1/11/2012	1.8	20
4/20/2012	1.7	53
7/27/2012	1.8	21
10/17/2012	2.75	20.1
2/19/2013	1.85	21
4/24/2013	1.83	21.2
8/28/2013	1.81	22.4
10/16/2013	1.80	23.5
1/13/2014	1.70	26.0
5/7/2014	1.79	23.9
8/6/2014	1.7	26
10/8/2014	1.74	28.3
2/18/2015	1.82	27.1

TWN-1

Date	Nitrate (mg/l)	Chloride (mg/l)
2/6/2009	0.7	19
7/21/2009	0.4	17
9/21/2009	0.4	19
10/28/2009	0.5	18
3/17/2010	0.5	17
5/26/2010	0.6	20
9/27/2010	0.6	19
12/7/2010	0.6	14
1/26/2011	0.5	17
4/20/2011	0.5	19
7/26/2011	0.5	14
10/17/2011	0.5	10
1/9/2012	0.6	15
4/18/2012	0.6	17
7/24/2012	0.6	17
10/15/2012	0.432	17.5
2/18/2013	0.681	17.6
4/23/2013	0.84	17.4
8/27/2013	1.24	24.1
10/16/2013	1.61	26.8
1/14/2014	1.47	29.2
5/6/2014	1.63	31.1
8/5/2014	1.7	28
10/8/2014	1.46	27.6
2/18/2015	1.37	27.8

TWN-2

Date	Nitrate (mg/l)	Chloride (mg/l)
2/6/2009	25.4	29
7/21/2009	25	25
9/21/2009	22.6	17
11/2/2009	20.8	55
3/24/2010	62.1	85
6/2/2010	69	97
9/29/2010	69	104
12/9/2010	48	93
2/1/2011	43	93
4/28/2011	40	85
7/28/2011	33	74
10/20/2011	33	76
1/12/2012	31	86
4/20/2012	48	103
7/31/2012	54	93
10/17/2012	22.1	79
2/19/2013	57.3	80.5
4/24/2013	57.7	82.1
8/27/2013	80	75.9
10/16/2013	111	70.4
1/13/2014	42.6	72.4
5/7/2014	44.7	84.9
8/6/2014	42	80
10/8/2014	70.6	81
2/18/2015	48.6	84.8

TWN-3

Date	Nitrate (mg/l)	Chloride (mg/l)
2/6/2009	23.6	96
7/21/2009	25.3	96
9/21/2009	27.1	99
11/2/2009	29	106
3/25/2010	25.3	111
6/3/2010	26	118
7/15/2010	27	106
12/10/2010	24	117
2/1/2011	24	138
4/28/2011	26	128
7/29/2011	25	134
10/20/2011	25	129
1/12/2012	25	143
4/20/2012	24	152
7/31/2012	27	158
10/17/2012	12.1	149
2/19/2013	22.2	157
4/24/2013	27.2	158
8/28/2013	20.9	171
10/17/2013	23.5	163
1/15/2014	19.6	160
5/7/2014	23.6	168
8/6/2014	19.5	174
10/9/2014	19.1	153
2/19/2015	19.4	164

TWN-4

Date	Nitrate (mg/l)	Chloride (mg/l)
2/6/2009	1	13
7/21/2009	0.05	12
9/21/2009	0.4	13
10/28/2009	0.4	11
3/16/2010	0.9	22
5/27/2010	1.0	22
9/27/2010	0.9	19
12/8/2010	1	21
1/25/2011	0.9	21
4/20/2011	0.9	21
7/26/2011	1.1	35
10/18/2011	0.9	20
1/9/2012	0.9	20
4/18/2012	1.1	24
7/25/2012	1.4	25
10/15/2012	1.45	26.4
2/18/2013	1.51	25.3
4/23/2013	1.63	24.4
8/27/2013	1.58	27.2
10/16/2013	1.69	29.4
1/14/2014	1.41	28.4
5/6/2014	1.55	29.6
8/5/2014	2.0	28
10/8/2014	1.44	30.7
2/18/2015	1.48	31.5

TWN-7

Date	Nitrate (mg/l)	Chloride (mg/l)
8/25/2009	ND	11.00
9/21/2009	ND	7.00
11/10/2009	0.1	7.00
3/17/2010	0.8	6.00
5/28/2010	1.2	6.00
7/14/2010	1.6	7.00
12/10/2010	1	4.00
1/27/2011	1.3	6.00
4/21/2011	1.7	6.00
7/29/2011	0.7	5.00
10/19/2011	2.2	6.00
1/11/2012	2.3	5.00
4/20/2012	1.2	6.00
7/26/2012	0.9	6.00
10/16/2012	0.641	5.67
2/19/2013	0.591	5.68
4/24/2013	1.16	5.88
8/28/2013	0.835	6.96
10/16/2013	0.986	5.70
1/15/2014	0.882	5.75
5/7/2014	0.564	5.26
8/6/2014	0.9	6.00
10/9/2014	0.968	5.93
2/19/2015	1.04	5.58

TWN-18

Date	Nitrate (mg/l)	Chloride (mg/l)
11/2/2009	1.3	57
3/17/2010	1.6	42
6/1/2010	1.8	63
9/27/2010	1.8	64
12/9/2010	1.6	59
1/27/2011	1.4	61
4/26/2011	1.8	67
7/28/2011	1.8	65
10/18/2011	1.9	60
1/10/2012	1.9	64
4/19/2012	2.1	64
7/26/2012	2.3	67
10/16/2012	1.95	67.5
2/18/2013	2.27	68.7
4/23/2013	2.32	64.3
8/27/2013	2.04	70.4
10/16/2013	2.15	67.3
1/14/2014	2.33	68.4
5/6/2014	2.18	76.5
8/5/2014	1.8	70
10/8/2014	1.47	74.8
2/18/2015	1.00	73.3

TW4-19

Date	Nitrate (mg/l)	Date	Chloride (mg/l)
7/22/2002	42.80	12/7/2005	81
9/12/2002	47.60	3/9/2006	86
3/28/2003	61.40	7/20/2006	123
6/23/2003	11.40	11/9/2006	134
7/15/2003	6.80	2/28/2007	133
8/15/2003	4.00	8/15/2007	129
9/12/2003	5.70	10/10/2007	132
9/25/2003	9.20	3/26/2008	131
10/29/2003	7.70	6/25/2008	128
11/9/2003	4.80	9/10/2008	113
8/16/2004	9.91	10/15/2008	124
9/17/2004	4.50	3/4/2009	127
3/16/2005	5.30	6/23/2009	132
6/7/2005	5.70	9/14/2009	43
8/31/2005	4.60	12/14/2009	124
12/1/2005	0.10	2/17/2010	144
3/9/2006	4.00	6/9/2010	132
6/14/2006	5.20	8/16/2010	142
7/20/2006	4.30	10/11/2010	146
11/9/2006	4.60	2/17/2011	135
2/28/2007	4.00	6/7/2011	148
8/15/2007	4.10	8/17/2011	148
10/10/2007	4.00	11/17/2011	148
3/26/2008	2.20	1/23/2012	138
6/25/2008	2.81	6/6/2012	149
9/10/2008	36.20	9/5/2012	149
10/15/2008	47.80	10/3/2012	150
3/4/2009	3.20	2/11/2013	164
6/23/2009	2.40	6/5/2013	148
9/14/2009	0.10	9/3/2013	179
12/14/2009	26.70	10/29/2013	206
2/17/2010	2.00	1/27/2014	134
6/9/2010	4.40	5/19/2014	152
8/16/2010	5.90	8/11/2014	140
10/11/2010	2.70	10/21/2014	130
2/17/2011	17.00	3/9/2015	238
6/7/2011	12.00		
8/17/2011	3.00		
11/17/2011	5.00		
1/23/2012	0.60		
6/6/2012	2.40		
9/5/2012	2.50		
10/3/2012	4.10		
2/11/2013	7.99		
6/5/2013	2.95		
9/3/2013	17.60		
10/29/2013	4.70		
1/27/2014	1.62		
5/19/2014	1.34		
8/11/2014	1.60		
10/21/2014	4.72		
3/9/2015	8.56		

The sampling program for TW4-19 was updated in the fourth quarter of 2005 to include analysis for chloride as well as nitrate. This change accounts for the different number of data points represented above.

TW4-21

Date	Nitrate (mg/l)	Date	Chloride (mg/l)
5/25/2005	14.6	12/7/2005	353
8/31/2005	10.1	3/9/2006	347
11/30/2005	9.6	7/20/2006	357
3/9/2006	8.5	11/8/2006	296
6/14/2006	10.2	2/28/2007	306
7/20/2006	8.9	6/27/2007	327
11/8/2006	8.7	8/15/2007	300
2/28/2007	8.7	10/10/2007	288
6/27/2007	8.6	3/26/2008	331
8/15/2007	8.6	6/25/2008	271
10/10/2007	8.3	9/10/2008	244
3/26/2008	14.3	10/15/2008	284
6/25/2008	8.8	3/11/2009	279
9/10/2008	7.6	6/24/2009	291
10/15/2008	8.0	9/15/2009	281
3/11/2009	8.3	12/22/2009	256
6/24/2009	8.1	2/25/2010	228
9/15/2009	9.2	6/10/2010	266
12/22/2009	8.4	8/12/2010	278
2/25/2010	8.4	10/13/2010	210
6/10/2010	12.0	2/22/2011	303
8/12/2010	14.0	6/1/2011	297
10/13/2010	7.0	8/17/2011	287
2/22/2011	9.0	11/16/2011	276
6/1/2011	13.0	1/19/2012	228
8/17/2011	14.0	6/13/2012	285
11/16/2011	13.0	9/13/2012	142
1/19/2012	15.0	10/4/2012	270
6/13/2012	11.0	2/13/2013	221
9/13/2012	13.0	6/18/2013	243
10/4/2012	14.0	9/12/2013	207
2/13/2013	11.8	11/13/2013	206
6/18/2013	13.8	2/5/2014	200
9/12/2013	10.3	5/22/2014	243
11/13/2013	9.0	8/27/2014	230
2/5/2014	11.4	10/29/2014	252
5/22/2014	11.5	3/12/2015	255
8/27/2014	7.1		
10/29/2014	10.0		
3/12/2015	10.9		

The sampling program for TW4-21 was updated in the fourth quarter of 2005 to include analysis for chloride as well as nitrate. This change accounts for the different number of data points represented above.

TW4-22

Date	Nitrate (mg/l)	Chloride (mg/l)
2/28/2007	20.9	347
6/27/2007	19.3	273
8/15/2007	19.3	259
10/10/2007	18.8	238
3/26/2008	39.1	519
6/25/2008	41.9	271
9/10/2008	38.7	524
10/15/2008	36.3	539
3/11/2009	20.7	177
6/24/2009	20.6	177
9/15/2009	40.3	391
12/29/2009	17.8	175
3/3/2010	36.6	427
6/15/2010	19	134
8/12/2010	18	127
8/24/2010	15	130
10/13/2010	16	134
2/23/2011	18	114
6/1/2011	17	138
8/17/2011	15	120
11/16/2011	19	174
1/19/2012	14	36
6/13/2012	12.8	35
9/12/2012	7	121
10/4/2012	14	130
2/11/2013	58	635
6/5/2013	50.2	586
9/3/2013	29.7	487
10/29/2013	45.2	501
1/27/2014	54.6	598
5/19/2014	47.2	614
8/11/2014	41.5	540
10/21/2014	54.9	596
3/9/2015	69.2	675

TW4-24

Date	Nitrate (mg/l)	Chloride (mg/l)
6/27/2007	26.1	770
8/15/2007	29	791
10/10/2007	24.7	692
3/26/2008	24.4	740
6/25/2008	45.3	834
9/10/2008	38.4	1180
10/15/2008	44.6	1130
3/4/2009	30.5	1010
6/24/2009	30.4	759
9/15/2009	30.7	618
12/17/2009	28.3	1080
2/25/2010	33.1	896
6/9/2010	30	639
8/11/2010	32	556
8/24/2010	31	587
10/6/2010	31	522
2/17/2011	31	1100
5/26/2011	35	1110
8/17/2011	34	967
11/16/2011	35	608
1/18/2012	37	373
6/6/2012	37	355
8/30/2012	37	489
10/3/2012	38	405
2/11/2013	35.9	1260
6/5/2013	23.7	916
9/3/2013	32.6	998
10/29/2013	34.6	1030
1/27/2014	31.6	809
5/19/2014	35	1020
8/11/2014	31.5	1150
10/21/2014	35.7	1050
3/9/2015	34.6	944

TW4-25

Date	Nitrate (mg/l)	Chloride (mg/l)
6/27/2007	17.1	395
8/15/2007	16.7	382
10/10/2007	17	356
3/26/2008	18.7	374
6/25/2008	22.1	344
9/10/2008	18.8	333
10/15/2008	21.3	366
3/4/2009	15.3	332
6/24/2009	15.3	328
9/15/2009	3.3	328
12/16/2009	14.2	371
2/23/2010	14.4	296
6/8/2010	16	306
8/10/2010	14	250
10/5/2010	15	312
2/16/2011	15	315
5/25/2011	16	321
8/16/2011	16	276
11/15/2011	16	294
1/18/2012	16	304
5/31/2012	16	287
9/11/2012	17	334
10/3/2012	17	338
2/11/2013	9.04	190
6/5/2013	5.24	136
9/3/2013	5.69	119
10/29/2013	6.10	88.6
1/27/2014	2.16	85.7
5/19/2014	1.21	51.1
8/11/2014	1.6	67
10/21/2014	1.03	58.1
3/9/2015	14.4	310

MW-30

Date	Nitrate (mg/l)	Date	Chloride (mg/l)
6/22/2005	12.4	6/22/2005	125
9/22/2005	12.8	9/22/2005	125
12/14/2005	13.6	12/14/2005	128
3/22/2006	13.8	3/22/2006	125
6/21/2006	14.5	6/21/2006	124
9/13/2006	14.1	9/13/2006	118
10/25/2006	14.6	10/25/2006	124
3/15/2007	14.4	3/15/2007	125
8/22/2007	14.6	8/22/2007	126
10/24/2007	14.9	10/24/2007	122
3/19/2008	14.8	3/19/2008	118
6/3/2008	18.7	6/3/2008	125
8/4/2008	17.3	8/4/2008	121
11/5/2008	15.6	11/5/2008	162
2/3/2009	15.3	2/3/2009	113
5/13/2009	15.1	5/13/2009	122
8/24/2009	20.9	8/24/2009	118
10/14/2009	15.0	10/14/2009	129
1/20/2010	15.4	1/20/2010	106
2/9/2010	16.1	2/9/2010	127
4/27/2010	15.8	4/27/2010	97
5/24/2010	17.0	9/14/2010	111
6/15/2010	15.3	11/9/2010	126
8/24/2010	16.0	2/1/2011	134
9/14/2010	15.0	4/11/2011	134
10/19/2010	15.0	5/10/2011	128
11/9/2010	15.0	6/20/2011	127
12/14/2010	16.0	7/5/2011	127
1/10/2011	15.0	8/3/2011	126
2/1/2011	16.0	9/7/2011	145
3/14/2011	17.0	10/4/2011	129
4/11/2011	16.0	11/8/2011	122
5/10/2011	16.0	12/12/2011	124
6/20/2011	17.0	1/24/2012	124
7/5/2011	17.0	2/14/2012	126
8/3/2011	14.0	3/14/2012	128
9/7/2011	16.0	4/10/2012	128
10/4/2011	16.0	5/2/2012	124
11/8/2011	16.0	6/18/2012	131
12/12/2011	16.0	7/10/2012	128
1/24/2012	17.0	8/7/2012	139
2/14/2012	17.0	9/19/2012	130
3/14/2012	18.0	10/23/2012	135
4/10/2012	17.0	11/13/2012	114
5/2/2012	16.0	12/26/2012	122

MW-30

Date	Nitrate (mg/l)	Date	Chloride (mg/l)
6/18/2012	15.0	1/23/2013	128
7/10/2012	17.0	2/26/2013	129
8/7/2012	18.0	3/20/2013	126
9/19/2012	16.0	4/17/2013	117
10/23/2012	16.2	5/15/2013	119
11/13/2012	18.5	6/25/2013	127
12/26/2012	17.2	7/10/2013	130
1/23/2013	19.2	8/20/2013	126
2/26/2013	21.4	9/18/2013	131
3/20/2013	14.3	10/22/2013	128
4/17/2013	16.8	11/20/2013	124
5/15/2013	18.8	12/18/2013	134
6/25/2013	16.1	1/8/2014	131
7/10/2013	17.6	2/25/2014	135
8/20/2013	16.4	3/11/2014	144
9/18/2013	16.9	4/23/2014	154
10/22/2013	19.7	5/14/2014	128
11/20/2013	19.5	6/3/2014	128
12/18/2013	20.7	7/29/2014	140
1/8/2014	20.3	8/20/2014	139
2/25/2014	18.4	9/9/2014	136
3/11/2014	21.3	10/7/2014	136
4/23/2014	18.3	11/10/2014	154
5/14/2014	17.9	12/10/2014	138
6/3/2014	19.4	1/21/2015	144
7/29/2014	15.6	2/4/2015	136
8/20/2014	13.8	3/3/2015	132
9/9/2014	16.8		
10/7/2014	11.0		
11/10/2014	16.2		
12/10/2014	17.1		
1/21/2015	19.5		
2/4/2015	14.9		
3/3/2015	17.3		

Under the groundwater sampling program, accelerated monitoring for nitrate began in MW-30 prior to when the accelerated monitoring for chloride began. This difference accounts for the different number of data points represented above.

MW-31

Date	Nitrate (mg/l)	Date	Chloride (mg/l)
6/22/2005	24.2	6/22/2005	139
9/22/2005	22.4	9/22/2005	136
12/14/2005	23.8	12/14/2005	135
3/22/2006	24.1	3/22/2006	133
6/21/2006	25.3	6/21/2006	138
9/13/2006	24.6	9/13/2006	131
10/25/2006	25.1	10/25/2006	127
3/15/2007	23.2	3/15/2007	132
3/15/2007	22.0	3/15/2007	132
8/27/2007	23.3	8/27/2007	136
10/24/2007	24.6	10/24/2007	122
3/19/2008	25.0	3/19/2008	124
6/3/2008	29.3	6/3/2008	128
8/4/2008	28.7	8/4/2008	124
11/11/2008	29.9	11/11/2008	119
2/3/2009	23.4	2/3/2009	115
5/13/2009	22.4	5/13/2009	124
8/24/2009	15.4	8/24/2009	122
10/14/2009	22.6	10/14/2009	138
2/9/2010	21.7	2/9/2010	128
4/20/2010	22.5	4/20/2010	128
5/21/2010	23.0	9/13/2010	139
6/15/2010	21.1	11/9/2010	138
8/24/2010	22.0	2/1/2011	145
9/13/2010	21.0	4/1/2011	143
10/19/2010	20.0	5/10/2011	143
11/9/2010	20.0	6/20/2011	145
12/14/2010	20.0	7/5/2011	148
1/10/2011	19.0	8/2/2011	148
2/1/2011	21.0	9/6/2011	148
3/14/2011	22.0	10/3/2011	145
4/1/2011	21.0	11/8/2011	145
5/10/2011	20.0	12/12/2011	148
6/20/2011	22.0	1/24/2012	155
7/5/2011	22.0	2/13/2012	150
8/2/2011	20.0	3/13/2012	152
9/6/2011	21.0	4/9/2012	160
10/3/2011	21.0	5/2/2012	151
11/8/2011	21.0	6/18/2012	138
12/12/2011	21.0	7/9/2012	161
1/24/2012	21.0	8/6/2012	175
2/13/2012	21.0	9/18/2012	172
3/13/2012	22.0	10/22/2012	157
4/9/2012	21.0	11/6/2012	189
5/2/2012	20.0	12/18/2012	170

MW-31

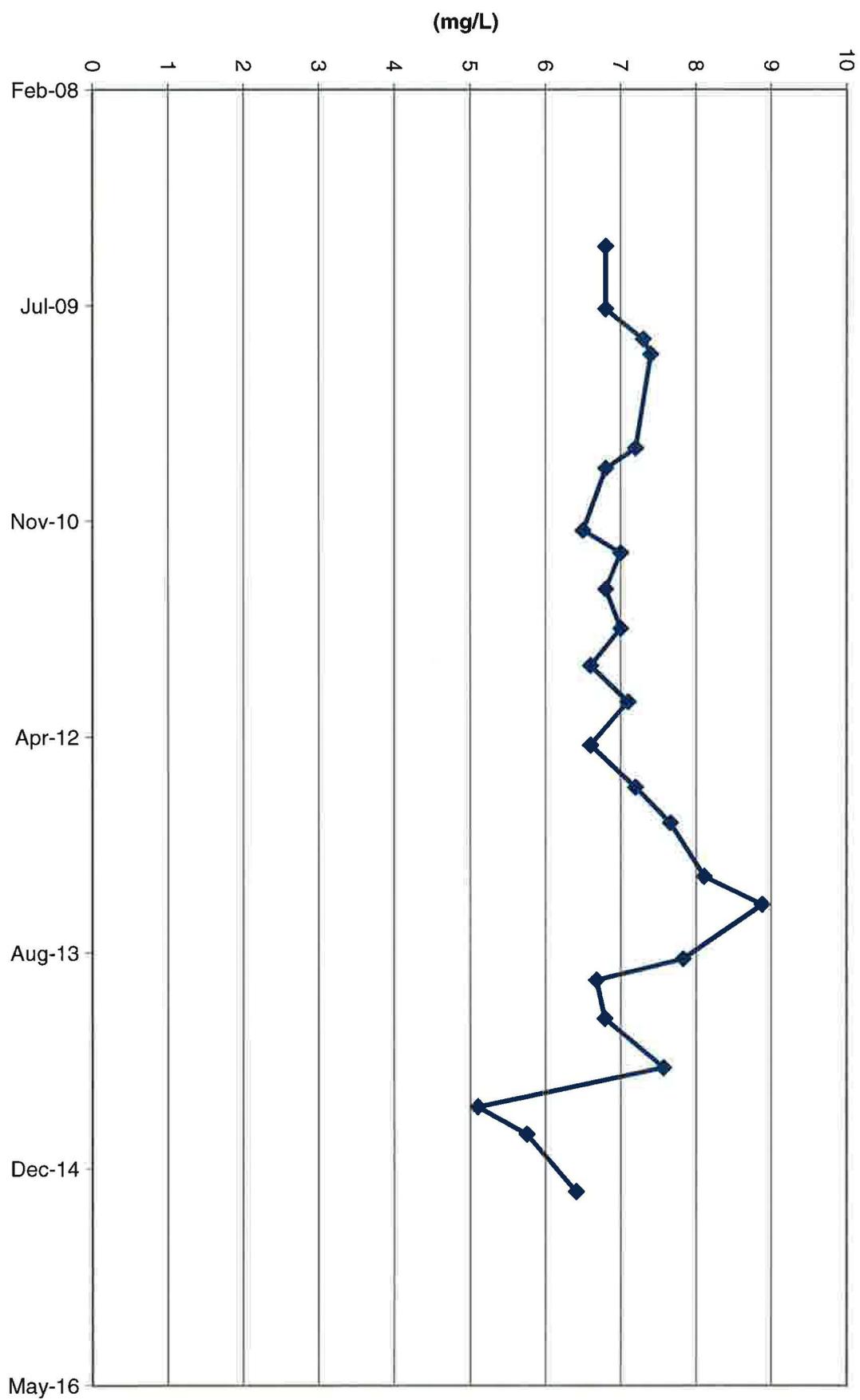
Date	Nitrate (mg/l)	Date	Chloride (mg/l)
6/18/2012	21.6	1/22/2013	176
7/9/2012	21.0	2/19/2013	174
8/6/2012	21.0	3/19/2013	168
9/18/2012	21.0	4/16/2013	171
10/22/2012	18.0	5/13/2013	169
11/6/2012	23.6	6/24/2013	179
12/18/2012	22.2	7/9/2013	182
1/22/2013	22.8	8/19/2013	183
2/19/2013	19.3	9/17/2013	193
3/19/2013	19.1	10/23/2013	188
4/16/2013	18.8	11/18/2013	174
5/13/2013	23.8	12/17/2013	203
6/24/2013	20.0	1/7/2014	194
7/9/2013	21.7	2/17/2014	197
8/19/2013	16.0	3/10/2014	230
9/17/2013	21.2	4/28/2014	230
10/23/2013	21.2	5/13/2014	200
11/18/2013	23.9	6/2/2014	173
12/17/2013	24.2	7/28/2014	200
1/7/2014	24.0	8/18/2014	210
2/17/2014	20.6	9/3/2014	210
3/10/2014	26.2	10/6/2014	205
4/28/2014	19.1	11/4/2014	204
5/13/2014	23.3	12/9/2014	215
6/2/2014	23.1	1/20/2015	226
7/28/2014	19.0	2/2/2015	211
8/18/2014	15.2	3/3/2015	209
9/3/2014	18.9		
10/6/2014	15.9		
11/4/2014	20.9		
12/9/2014	17.0		
1/20/2015	20.9		
2/2/2015	18.7		
3/3/2015	19.8		

Under the groundwater sampling program, accelerated monitoring for nitrate began in MW-31 prior to when the accelerated monitoring for chloride began. This difference accounts for the different number of data points represented above.

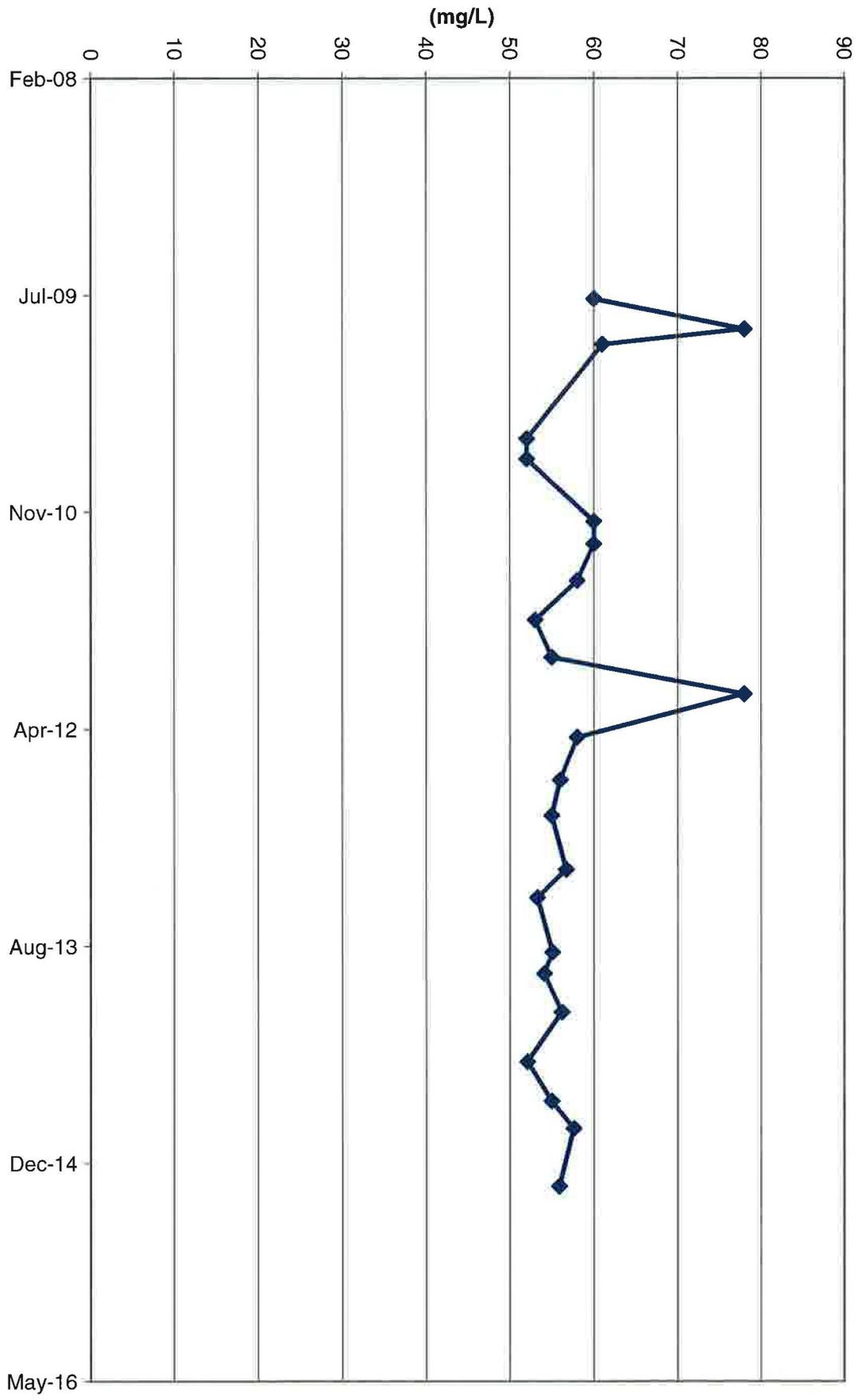
Tab K

Concentration Trend Graphs

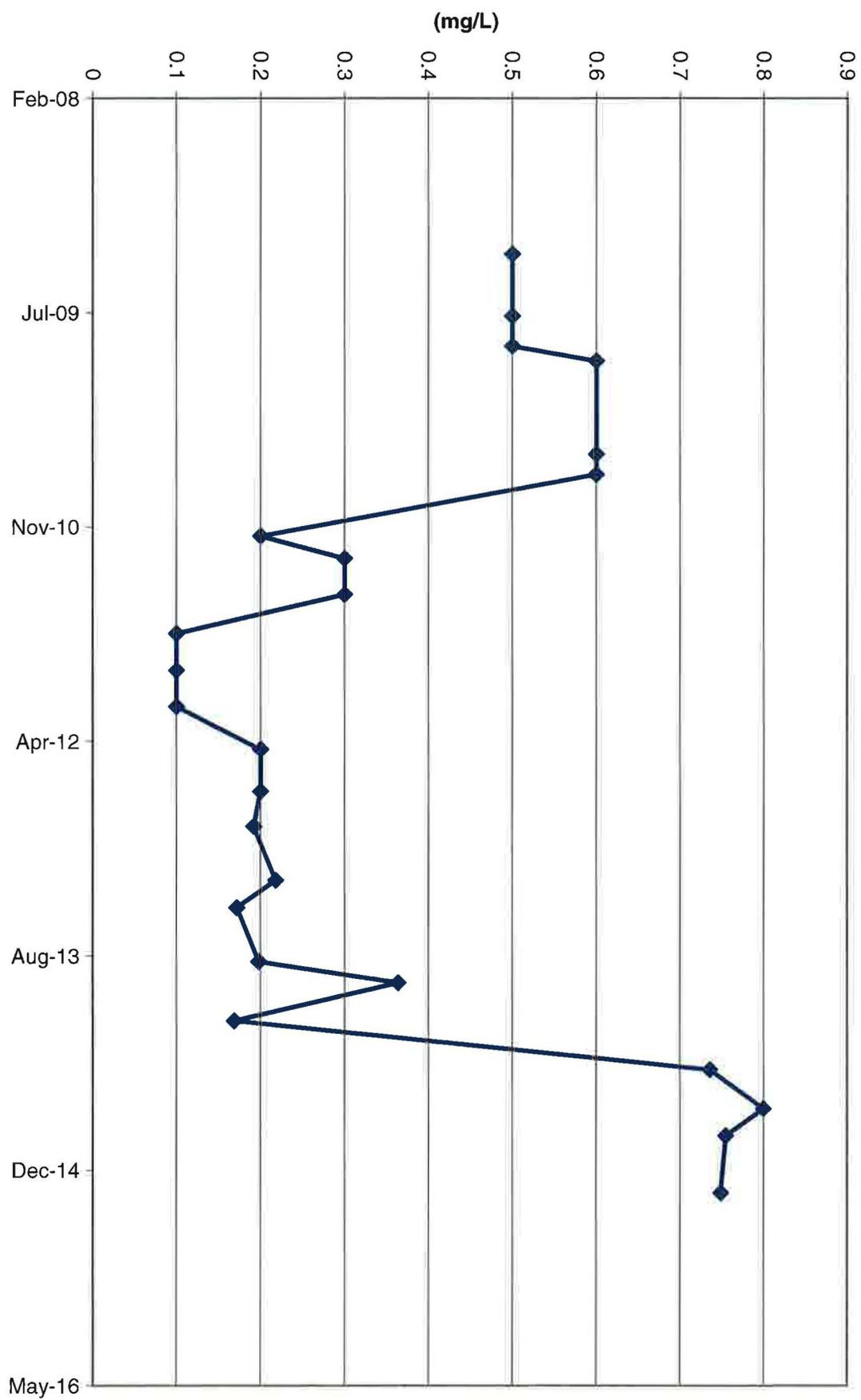
Piezometer 1 Nitrate Concentrations



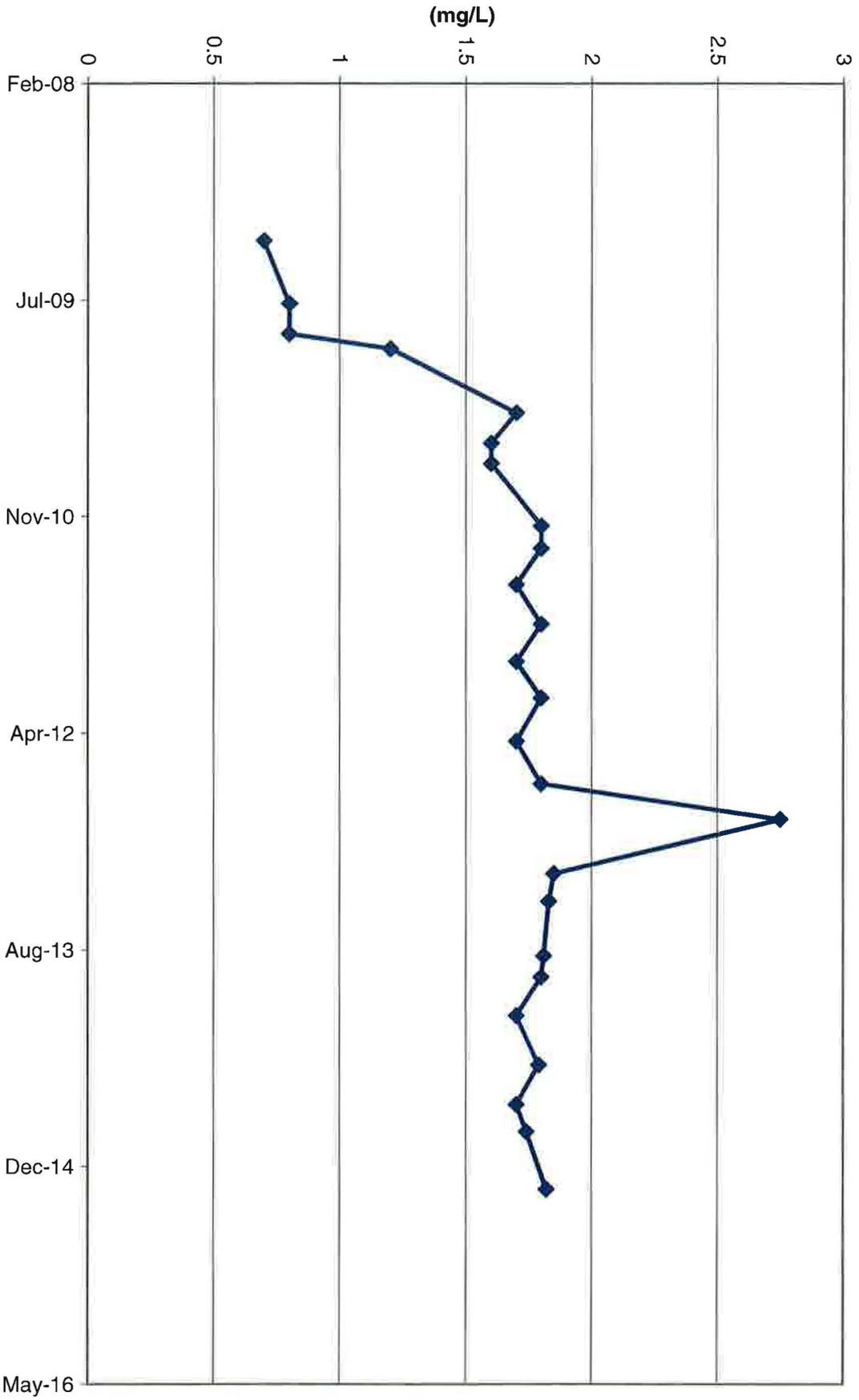
Piezometer 1 Chloride Concentrations



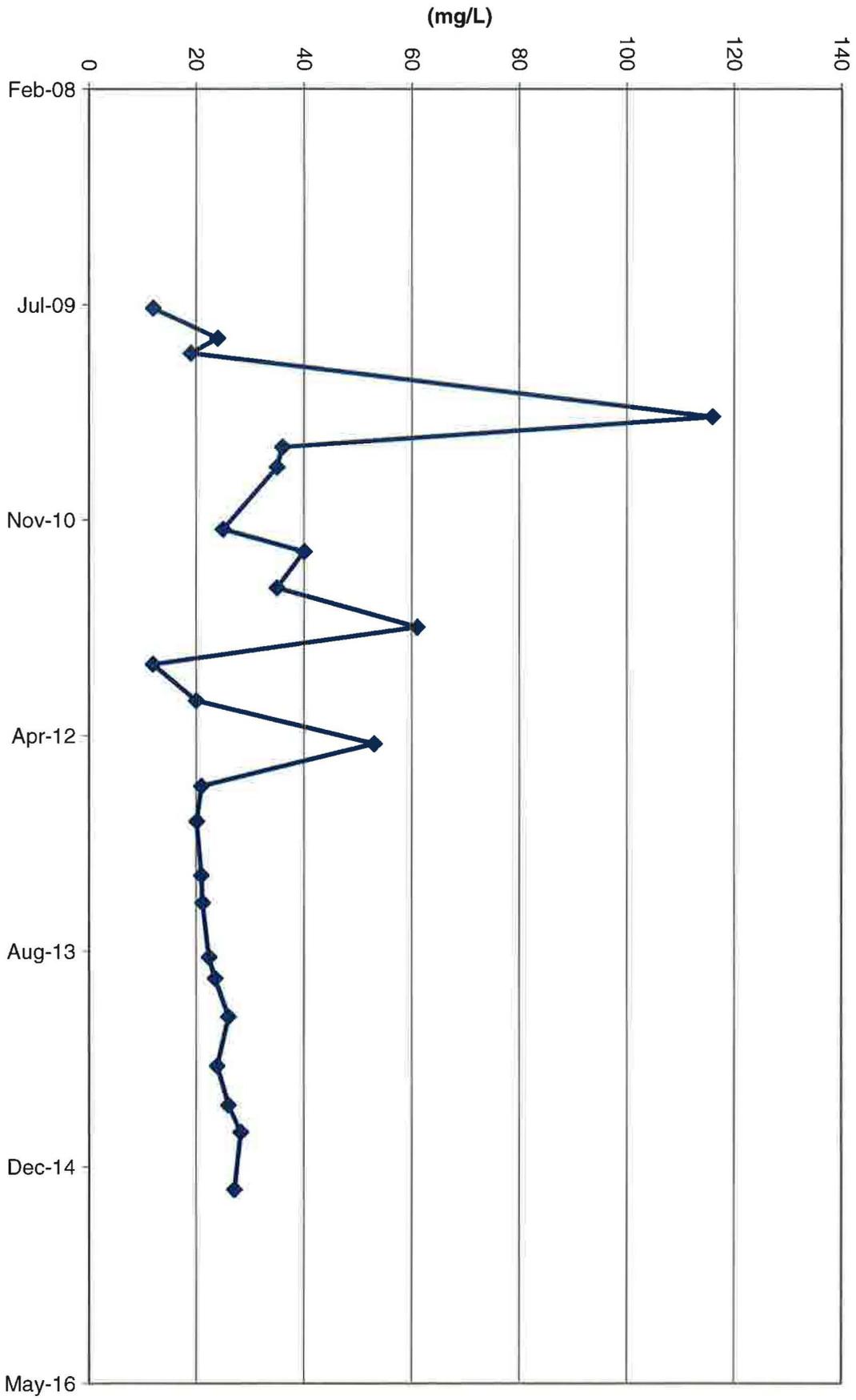
Piezometer 2 Nitrate Concentrations



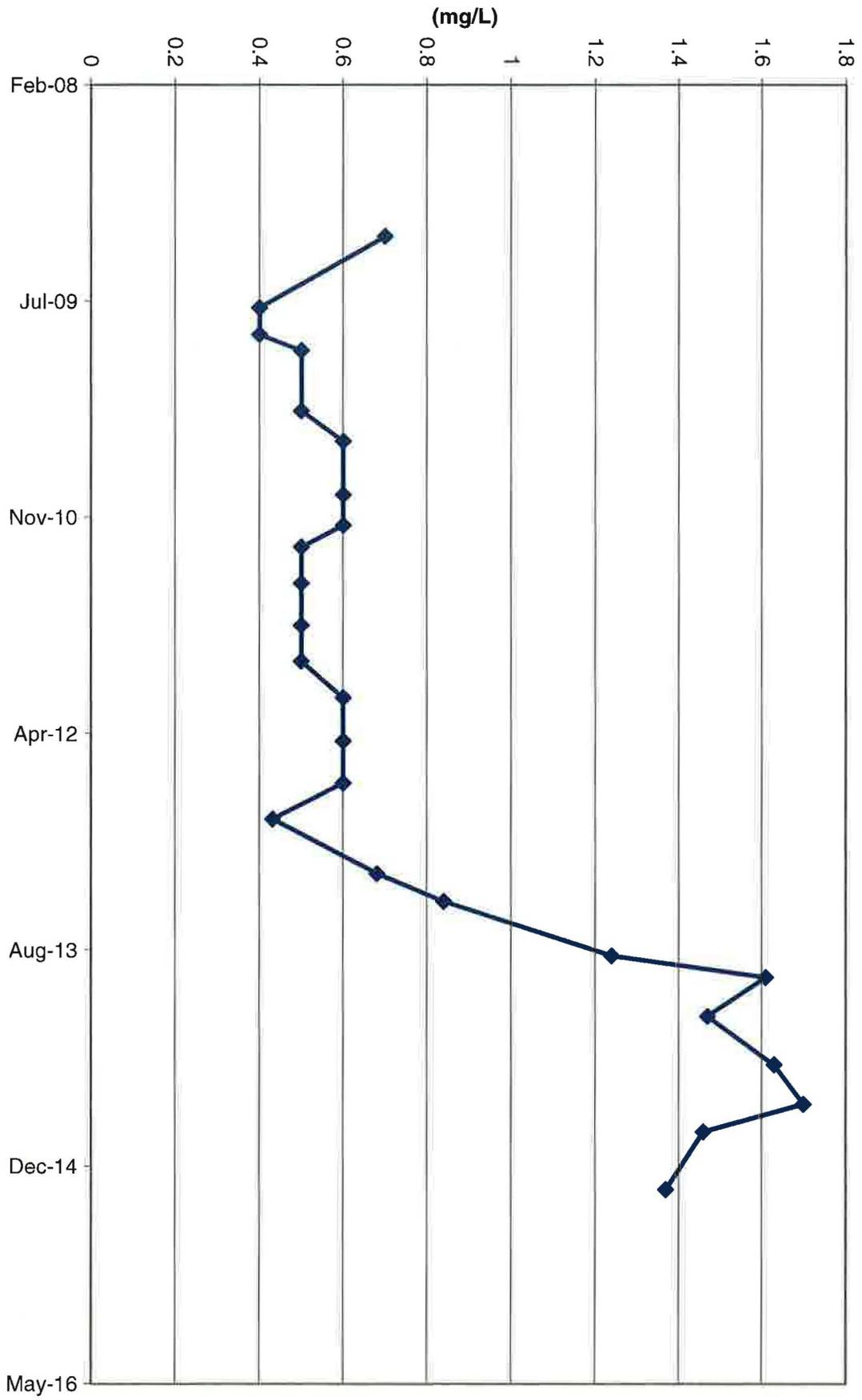
Piezometer 3 Nitrate Concentrations



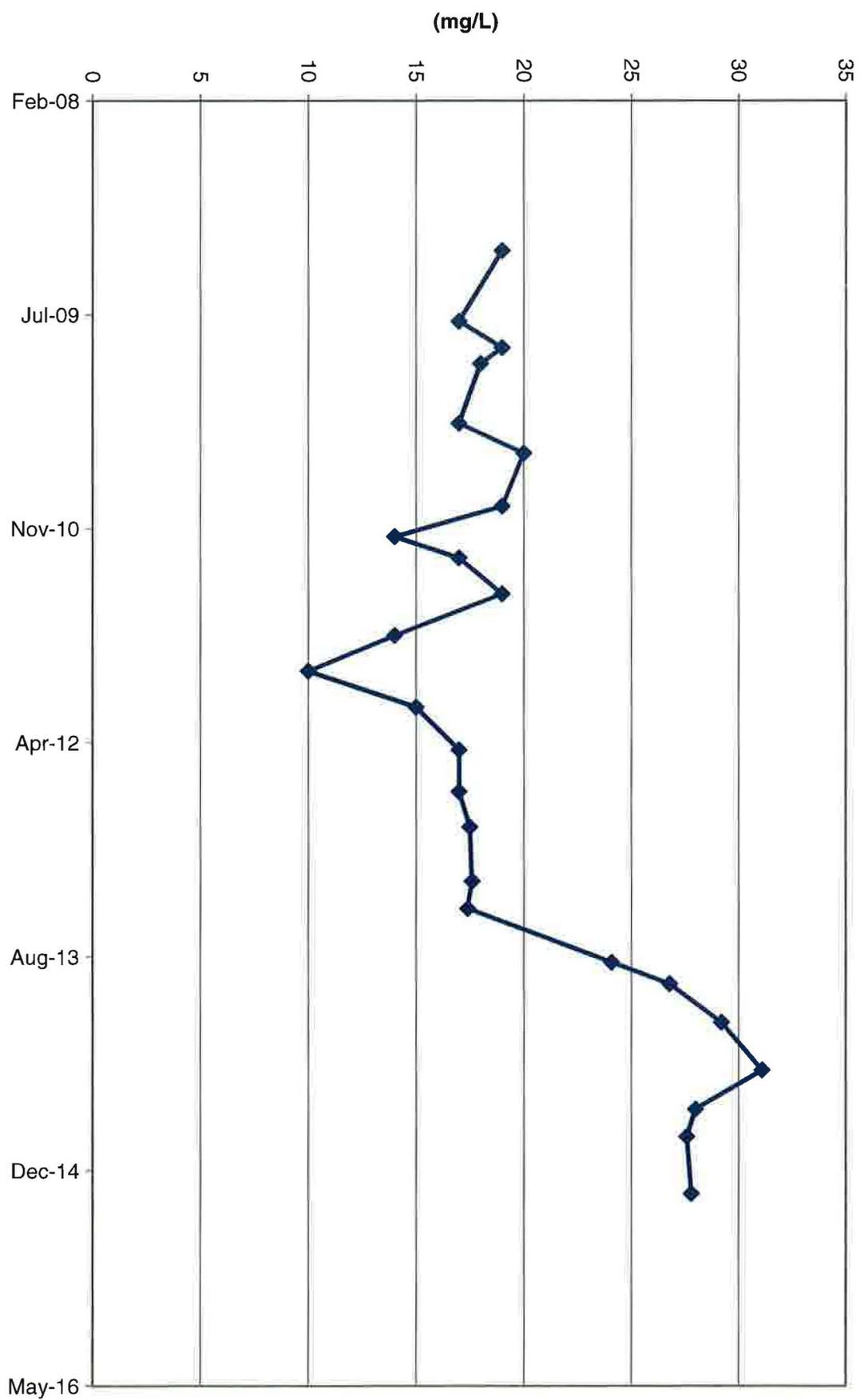
Piezometer 3 Chloride Concentrations



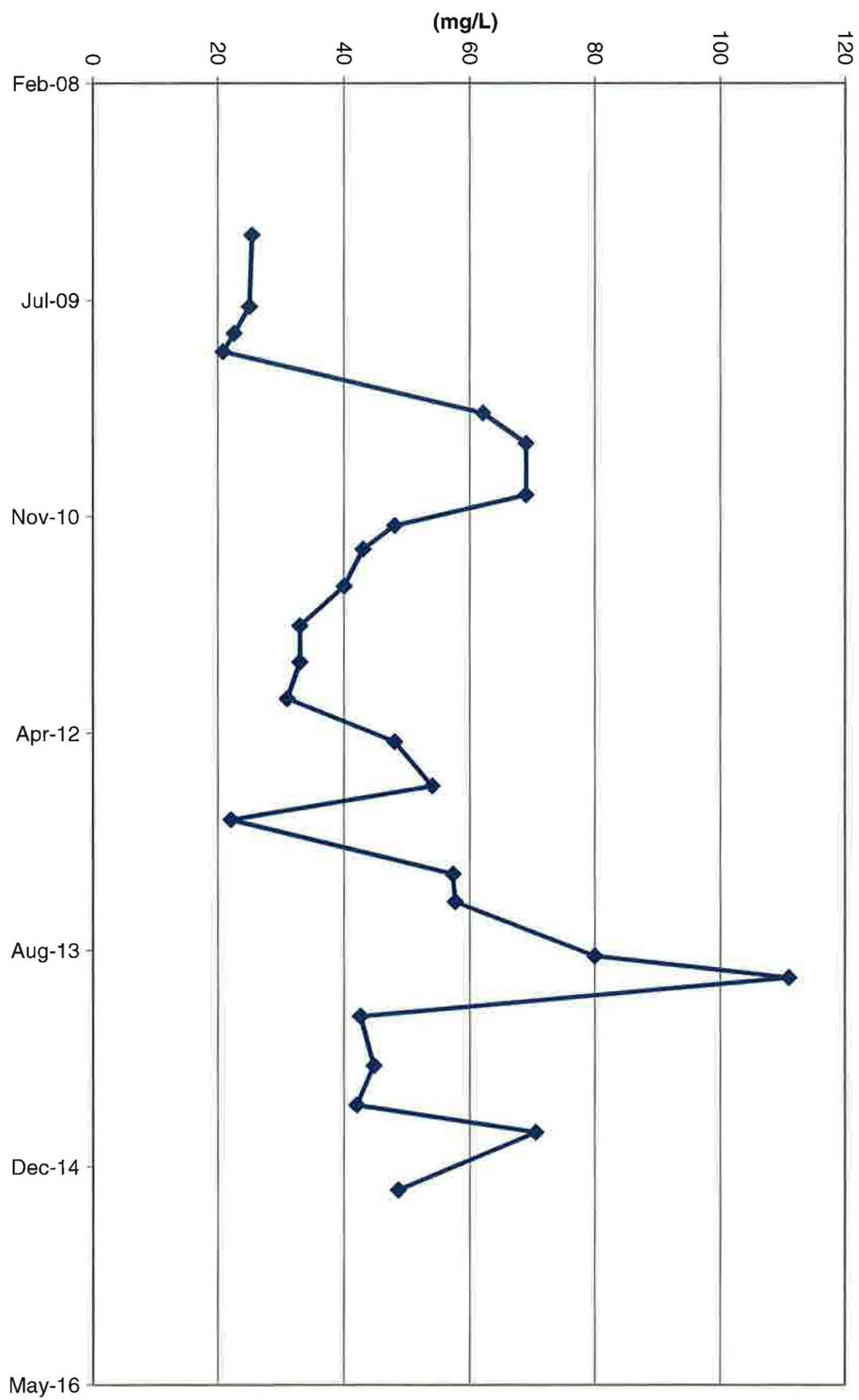
TWN-1 Nitrate Concentrations



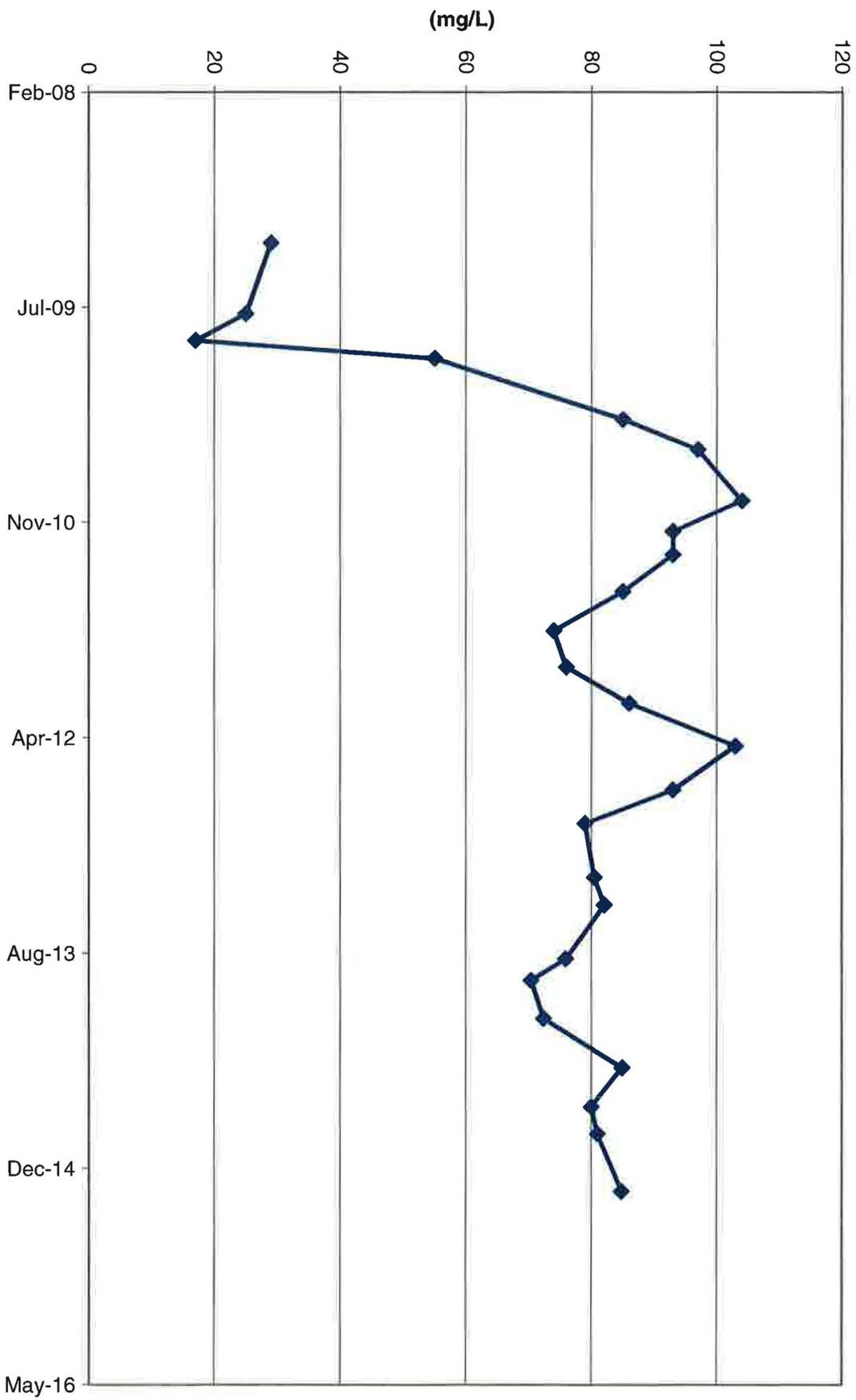
TWN-1 Chloride Concentrations



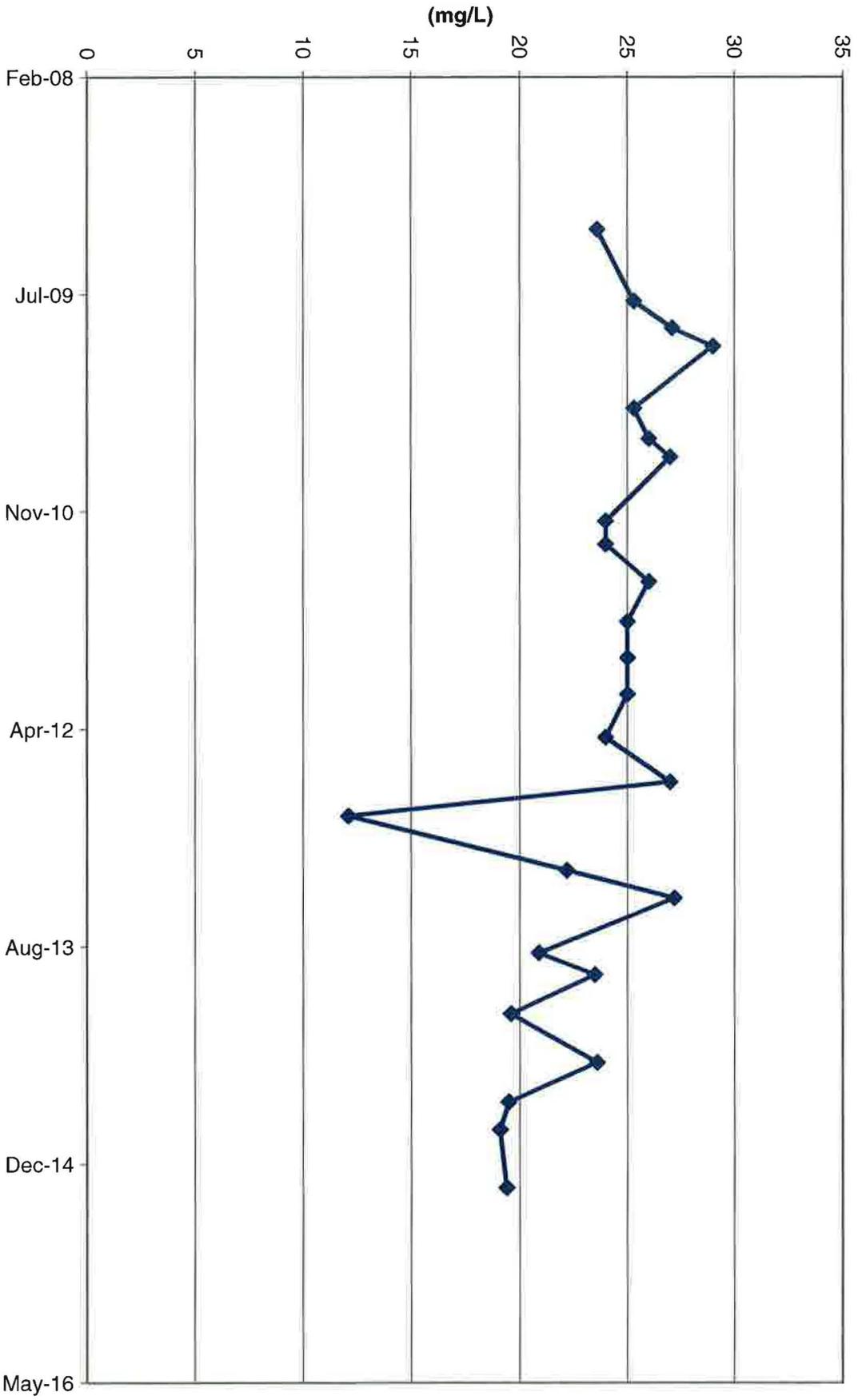
TWN-2 Nitrate Concentrations



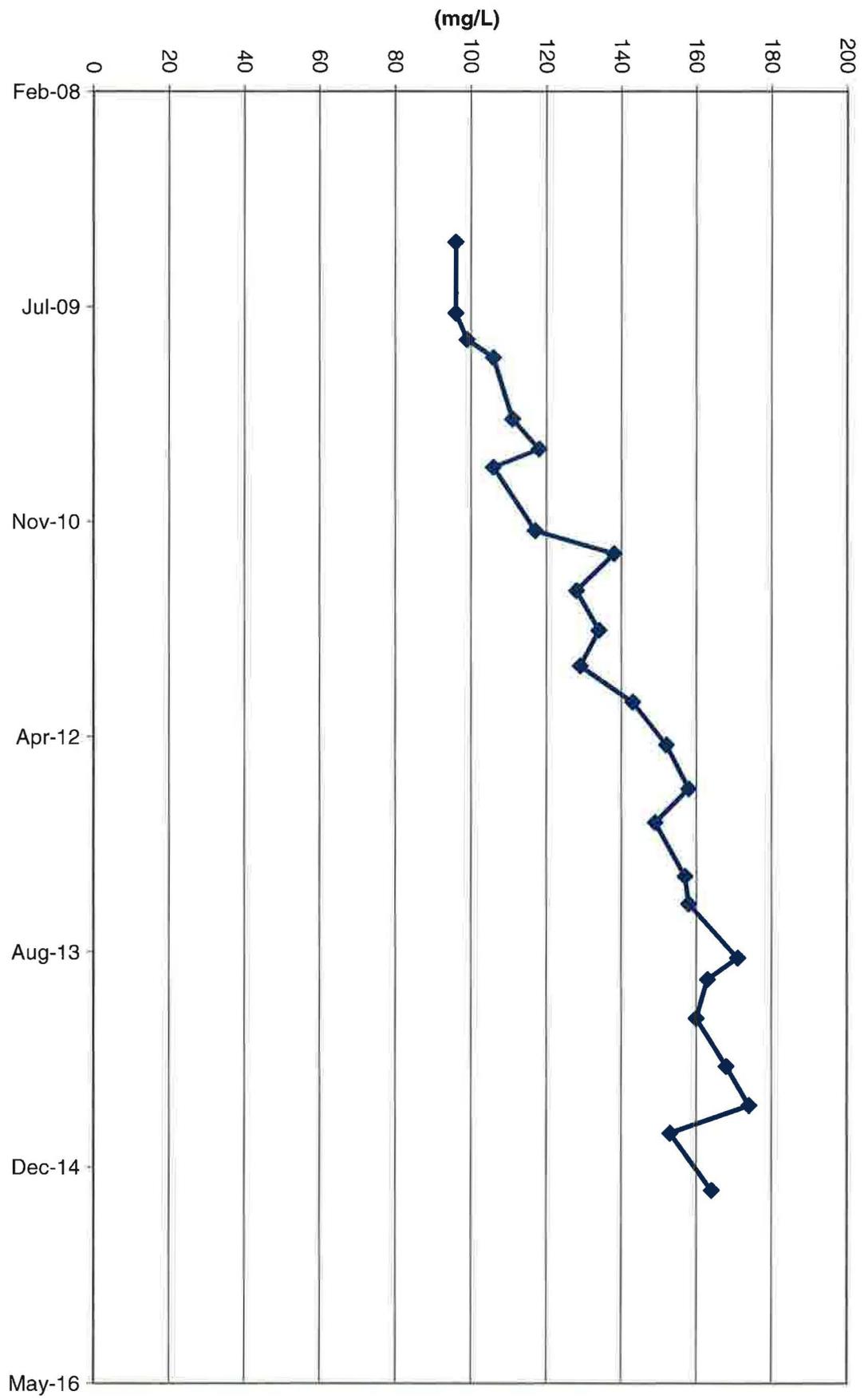
TWN-2 Chloride Concentrations



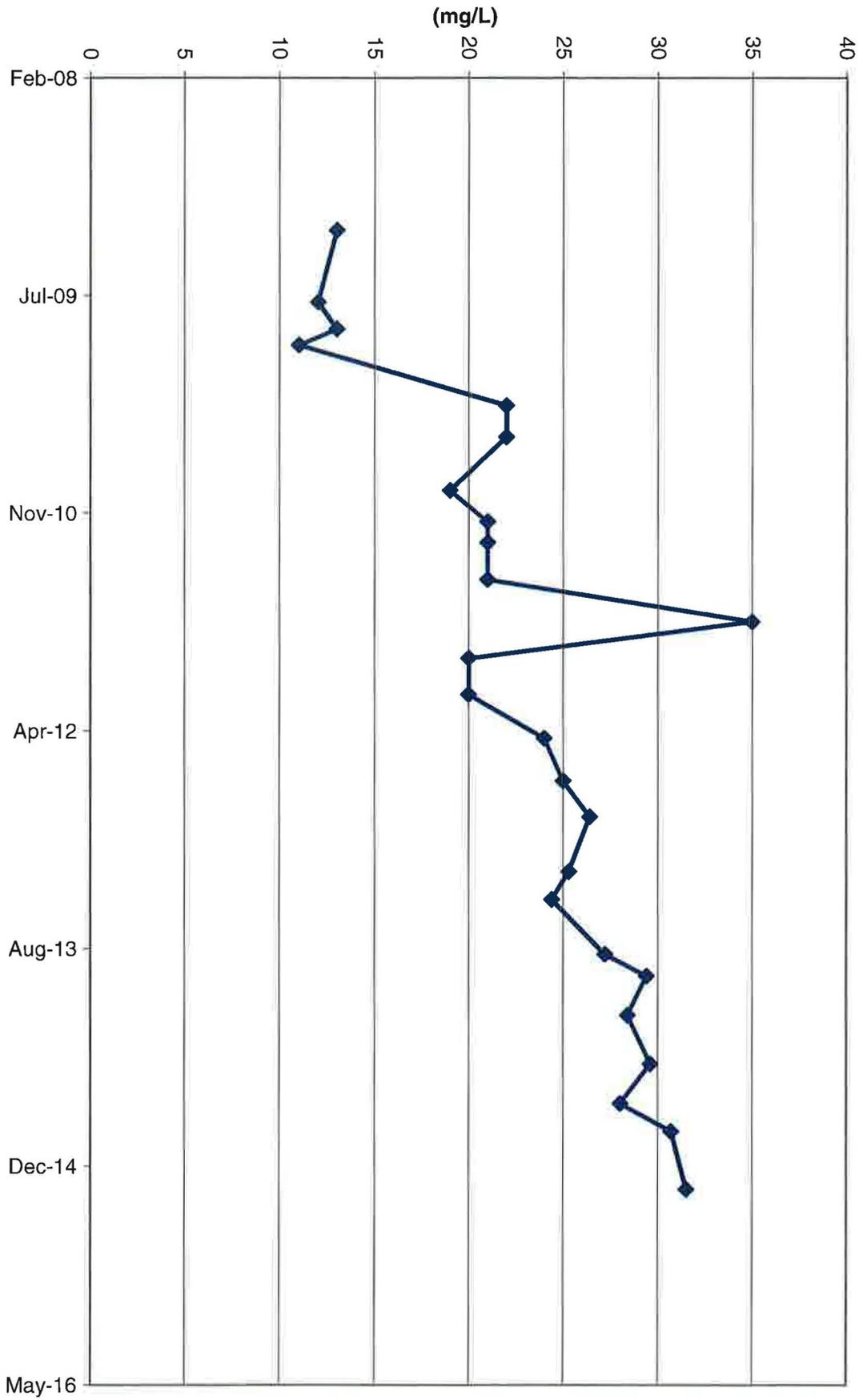
TWN-3 Nitrate Concentrations



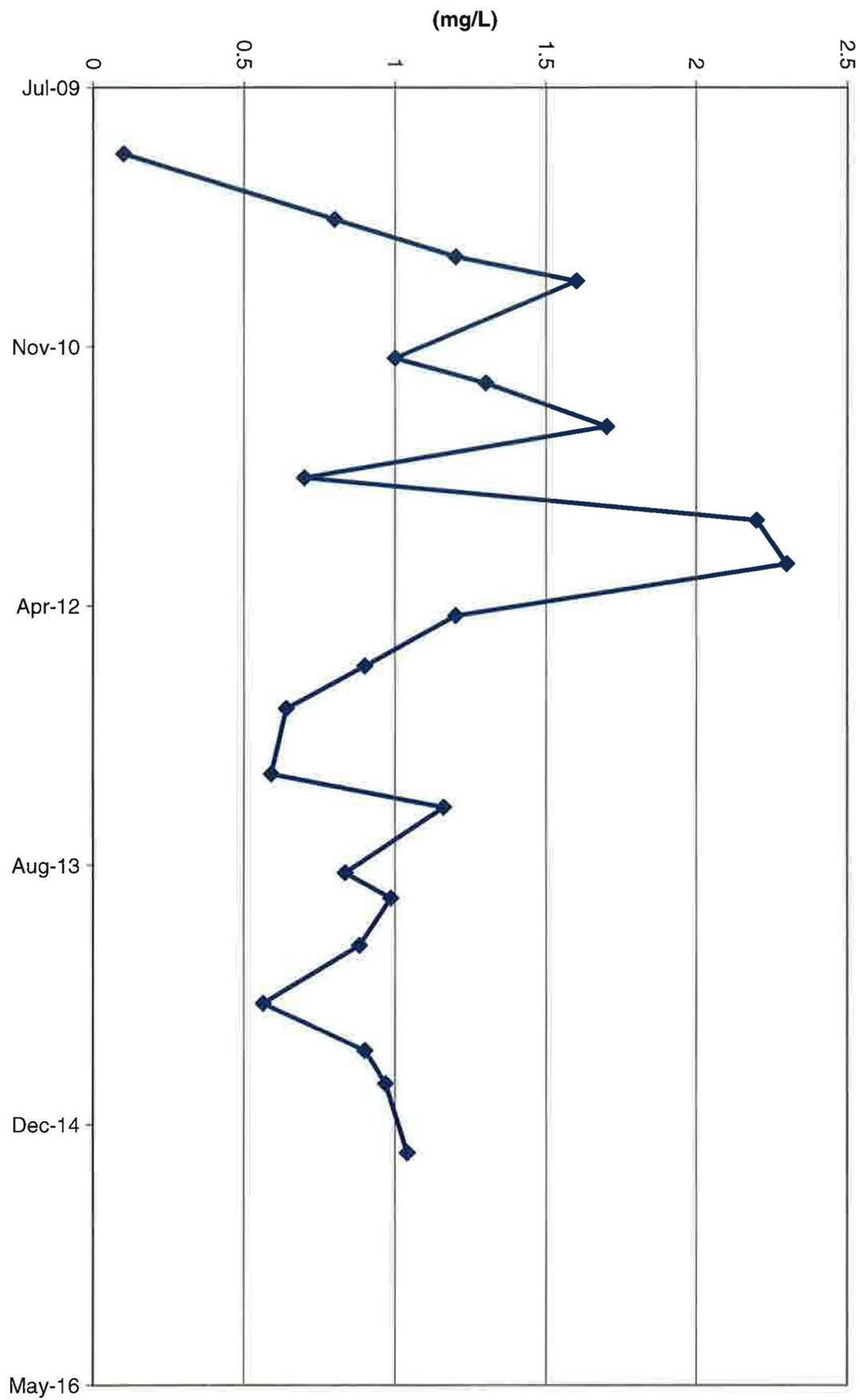
TWN-3 Chloride Concentrations



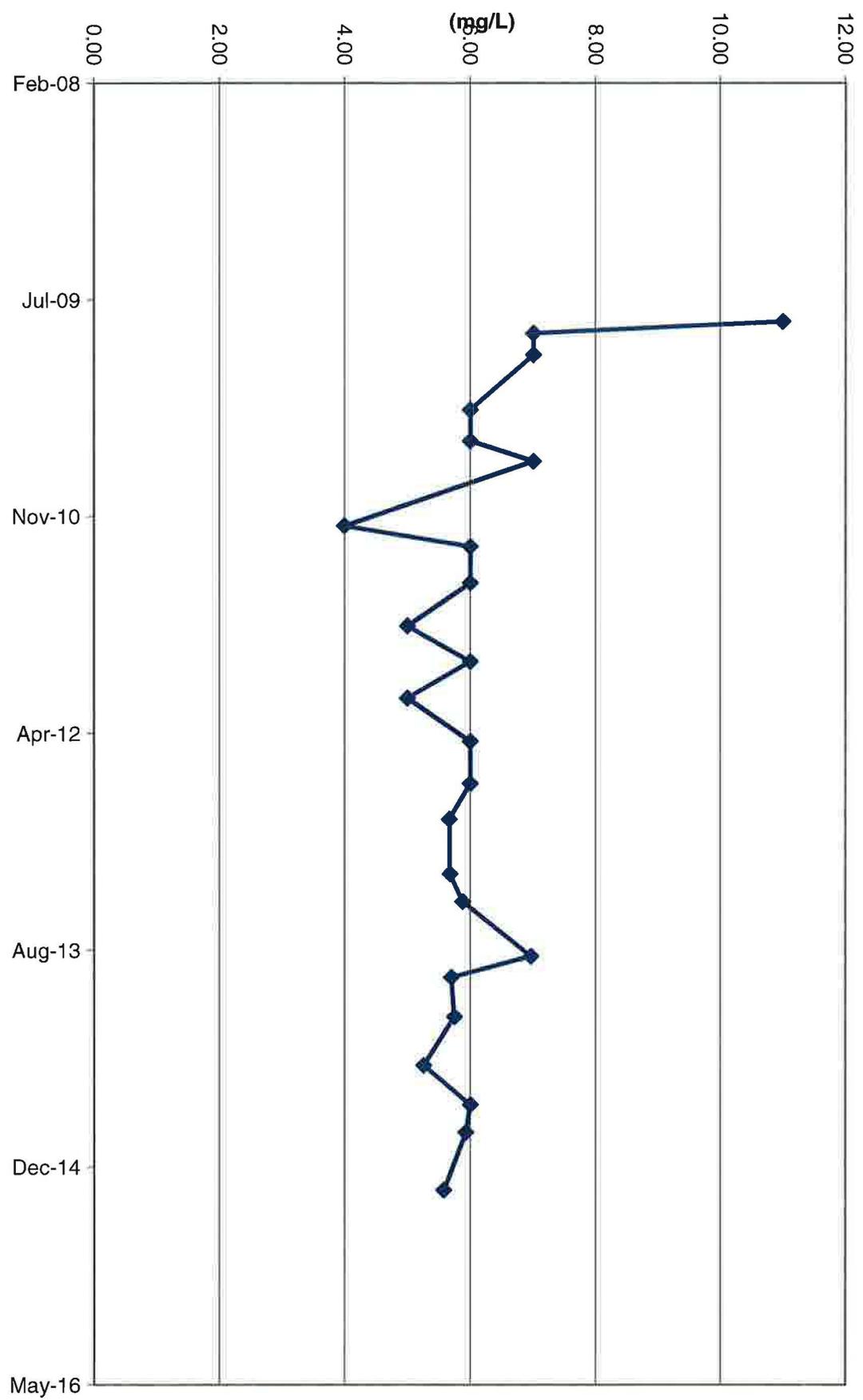
TWN-4 Chloride Concentrations



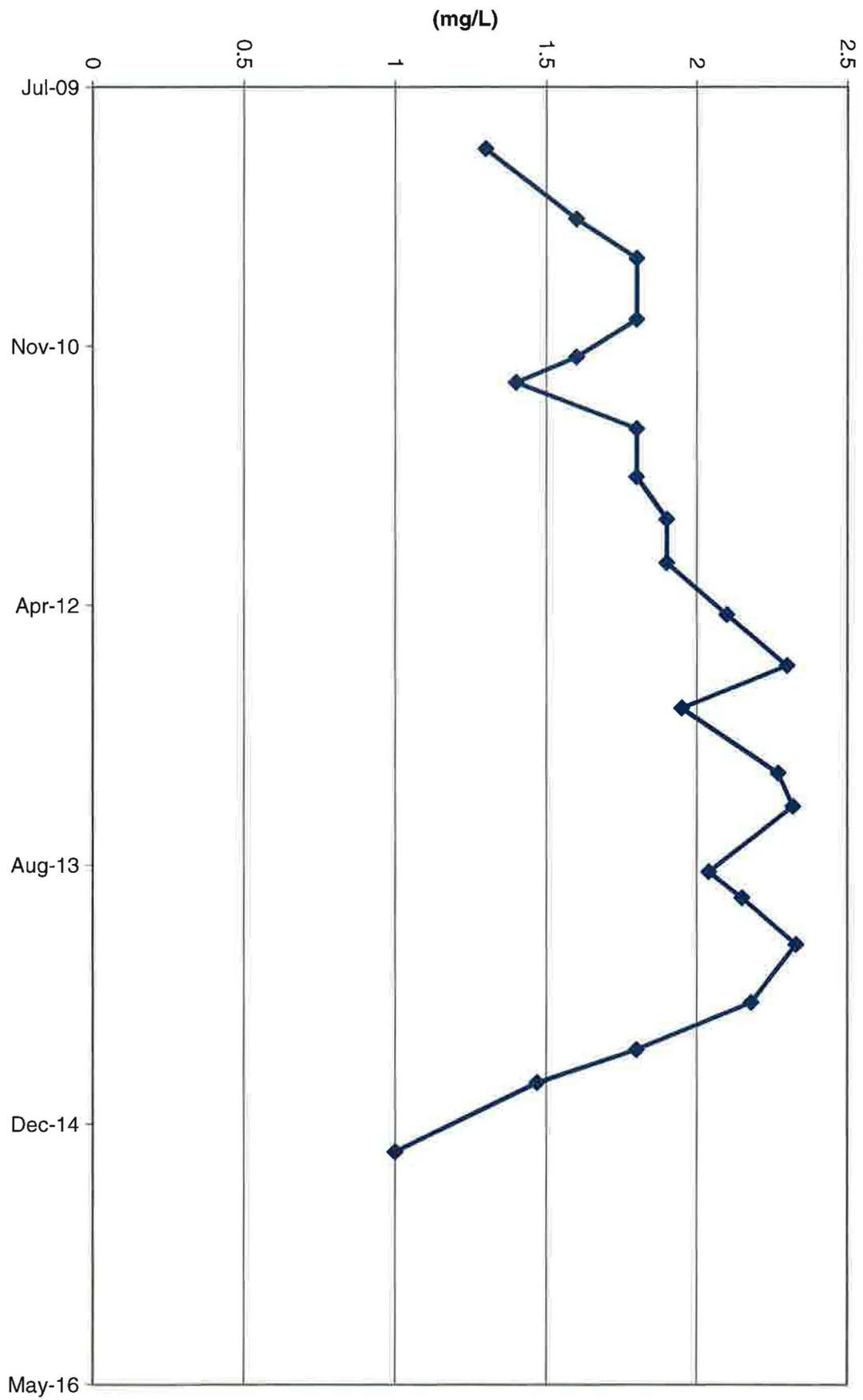
TWN-7 Nitrate Concentrations



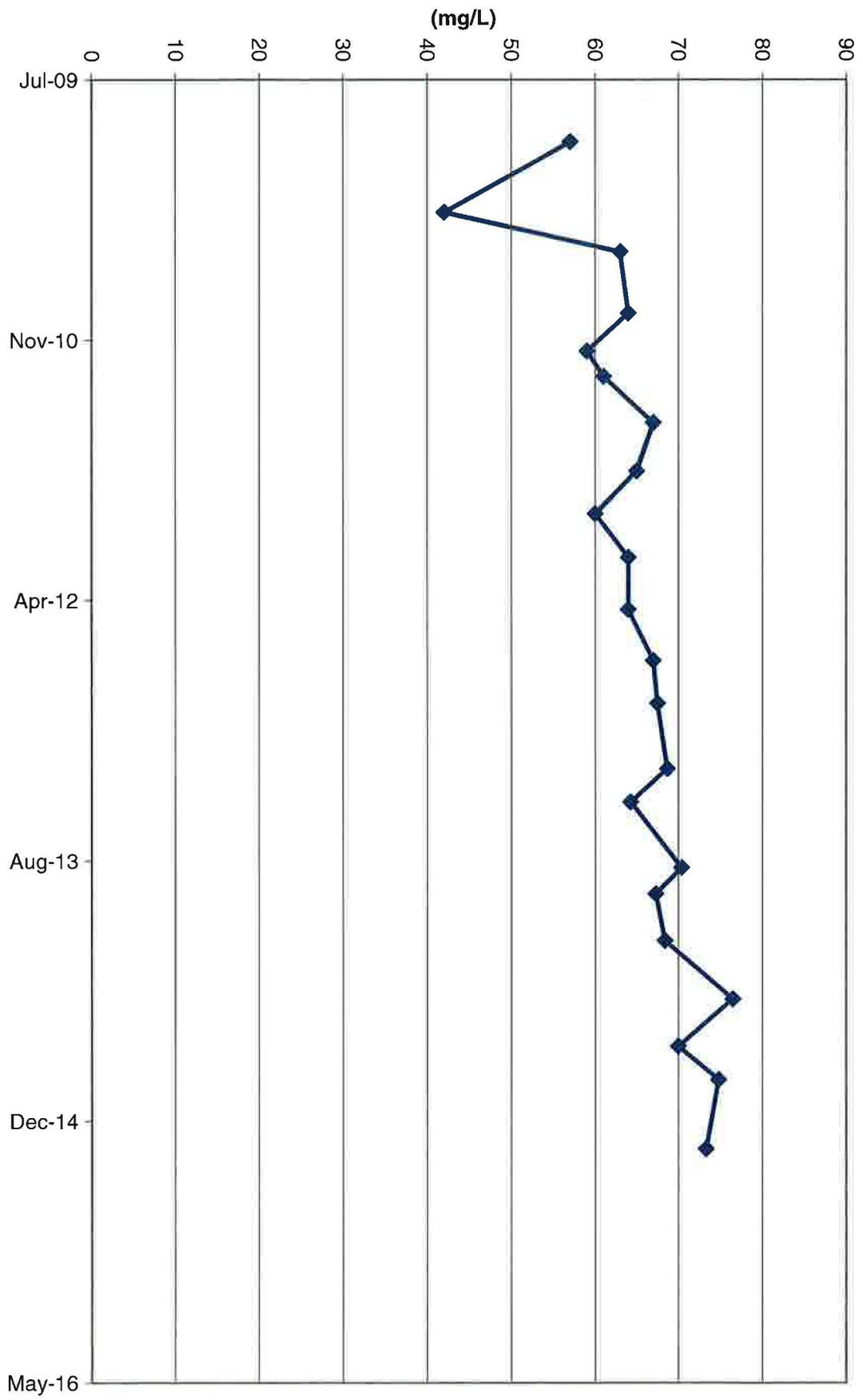
TWN-7 Chloride Concentrations



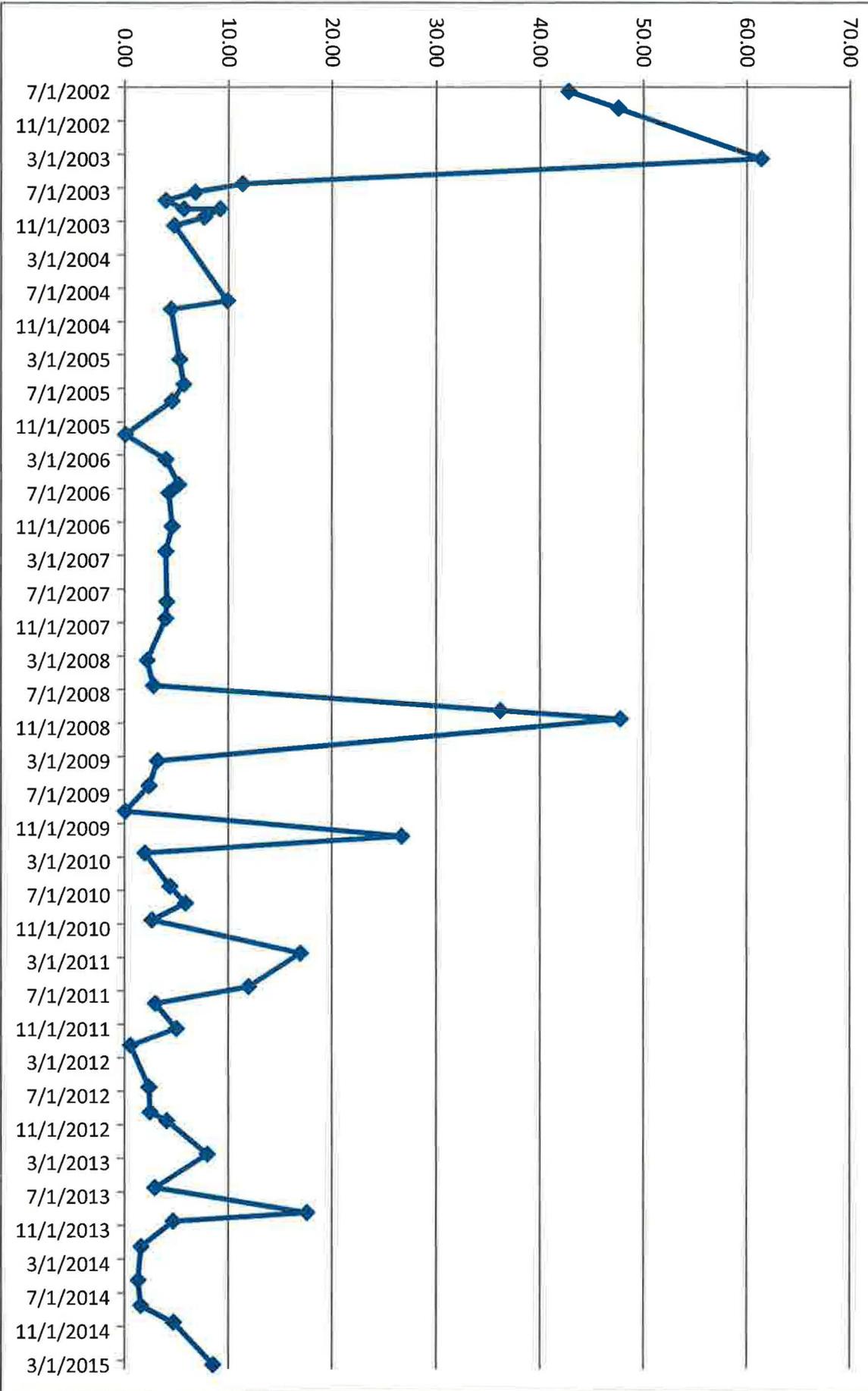
TWN-18 Nitrate Concentrations



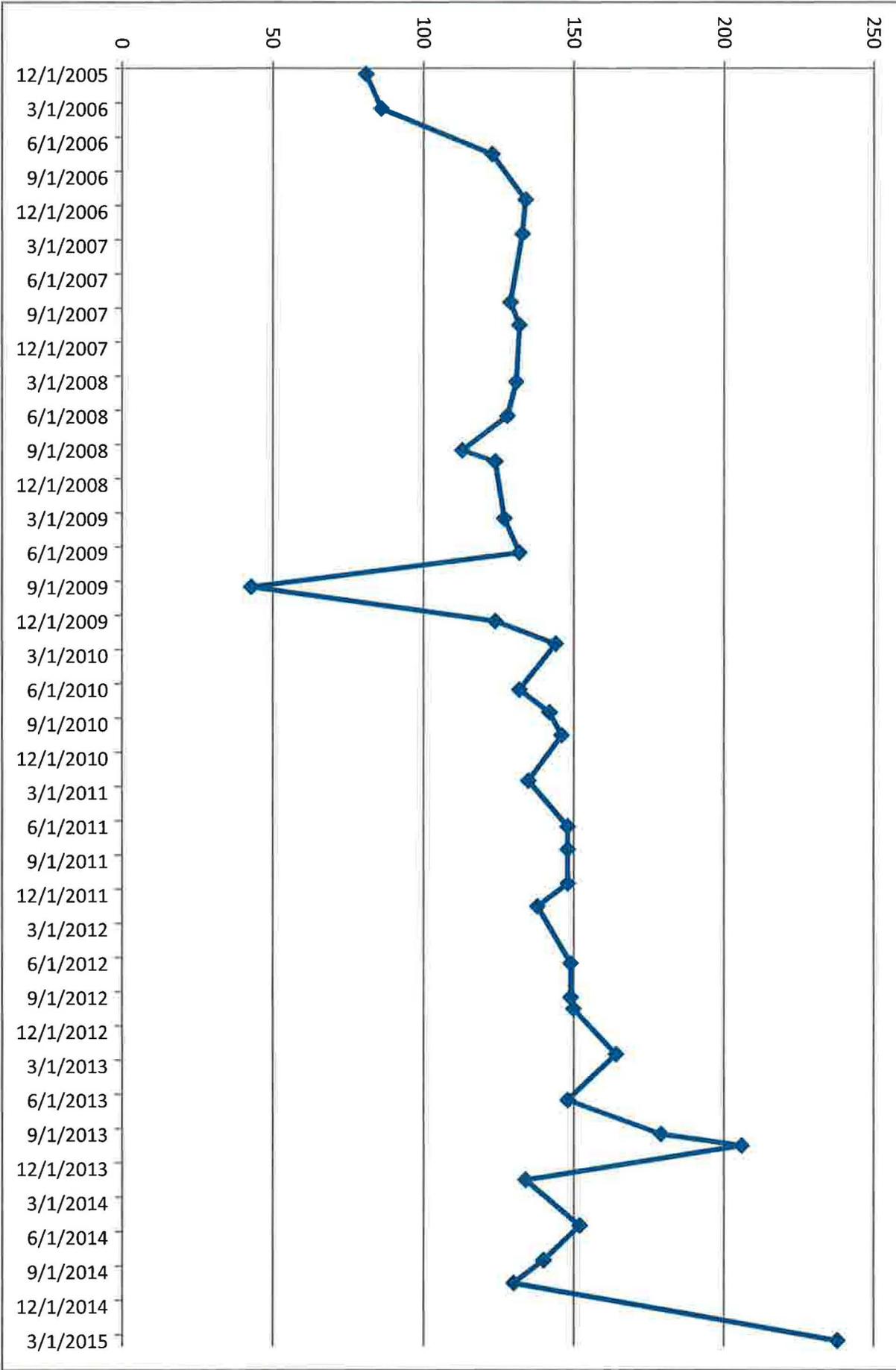
TWN-18 Chloride Concentrations



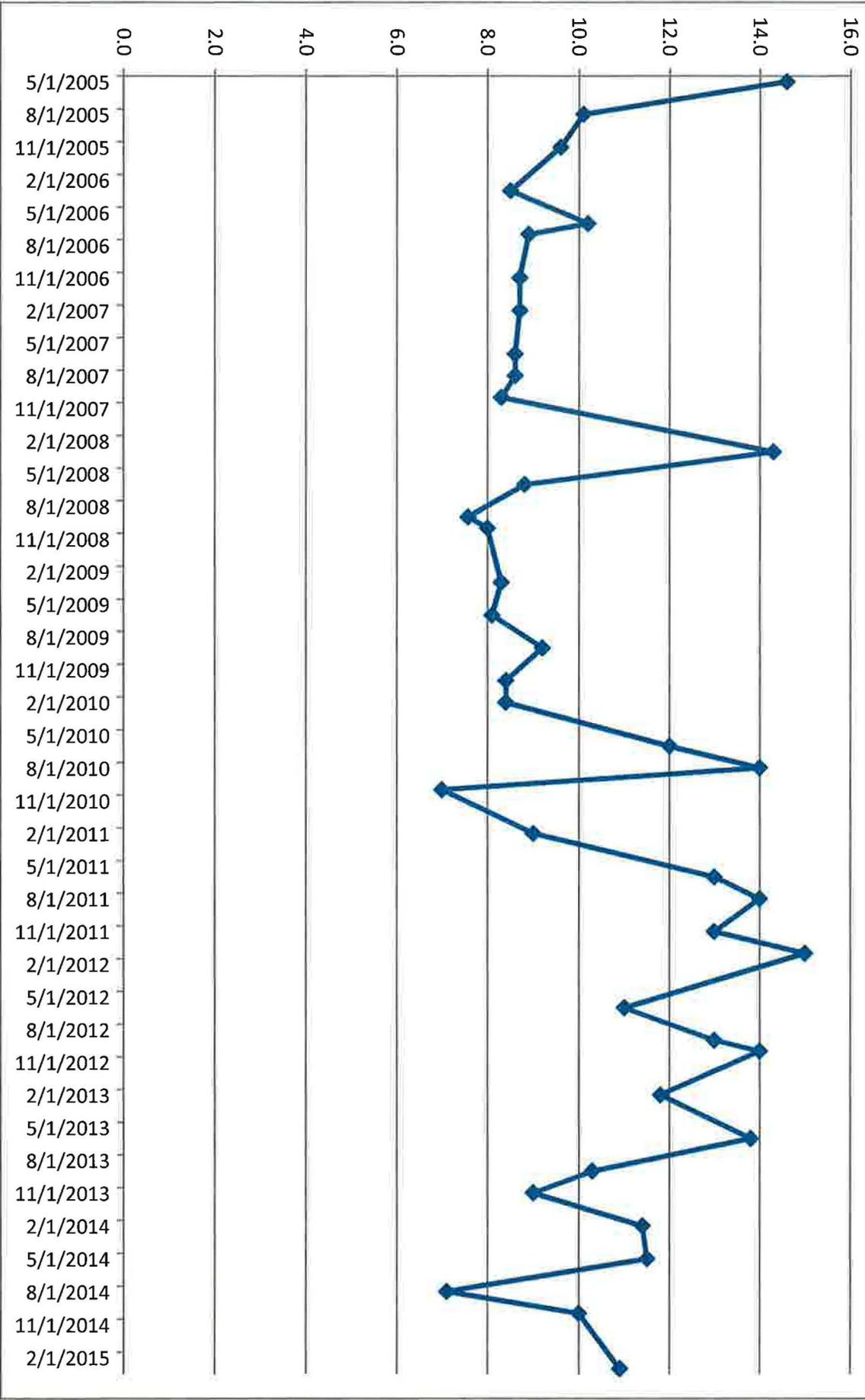
TW4-19 Nitrate Concentrations



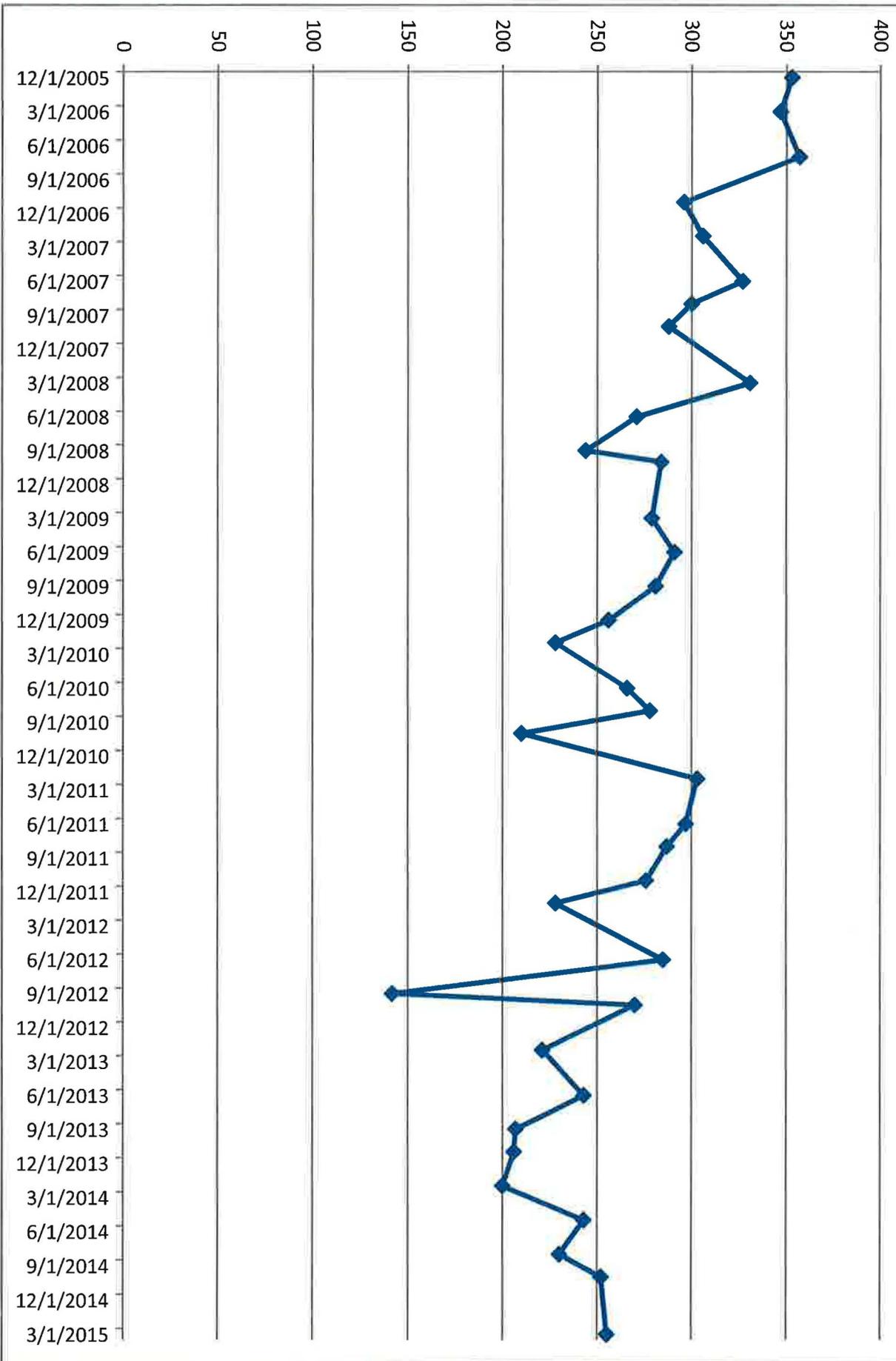
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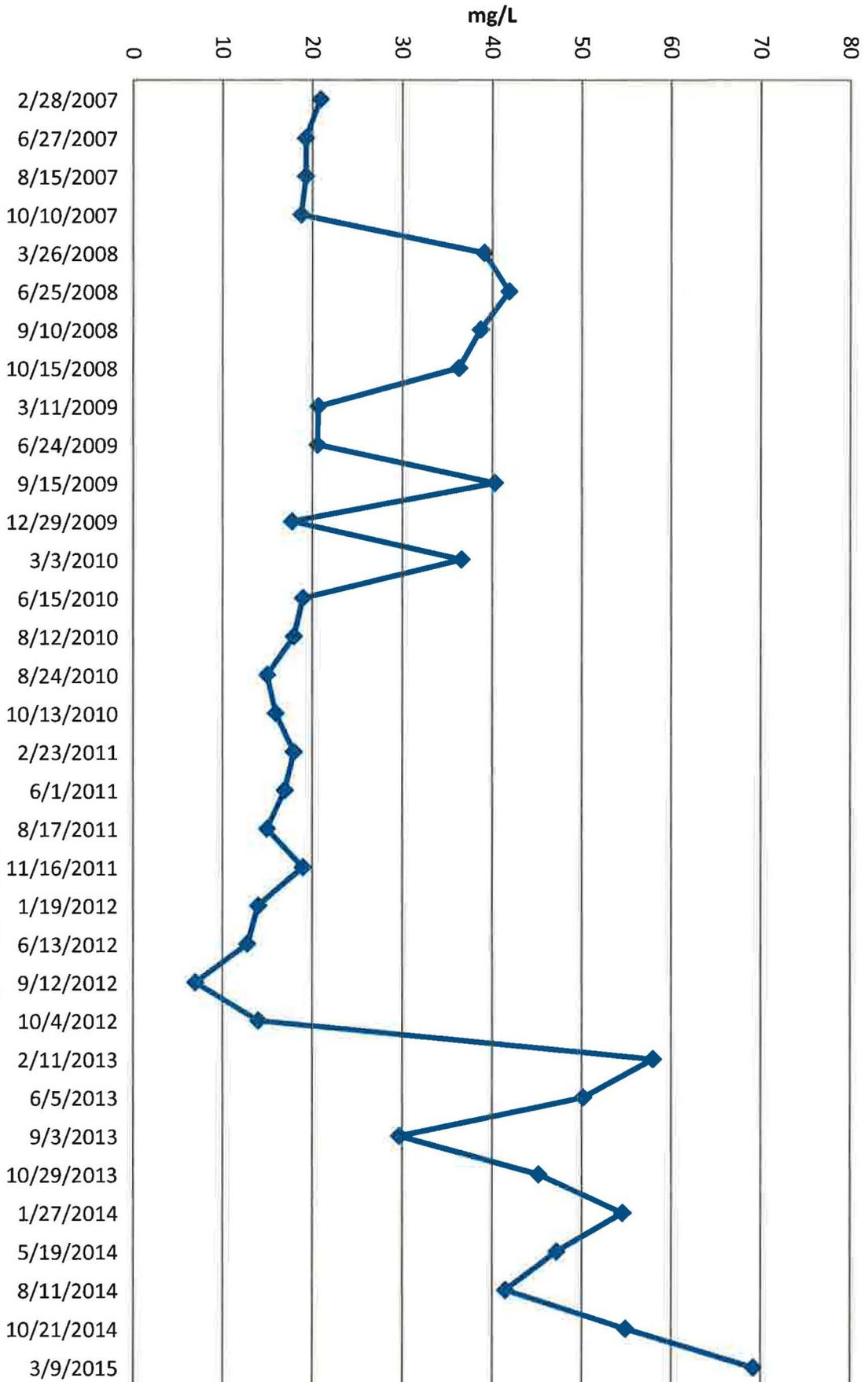
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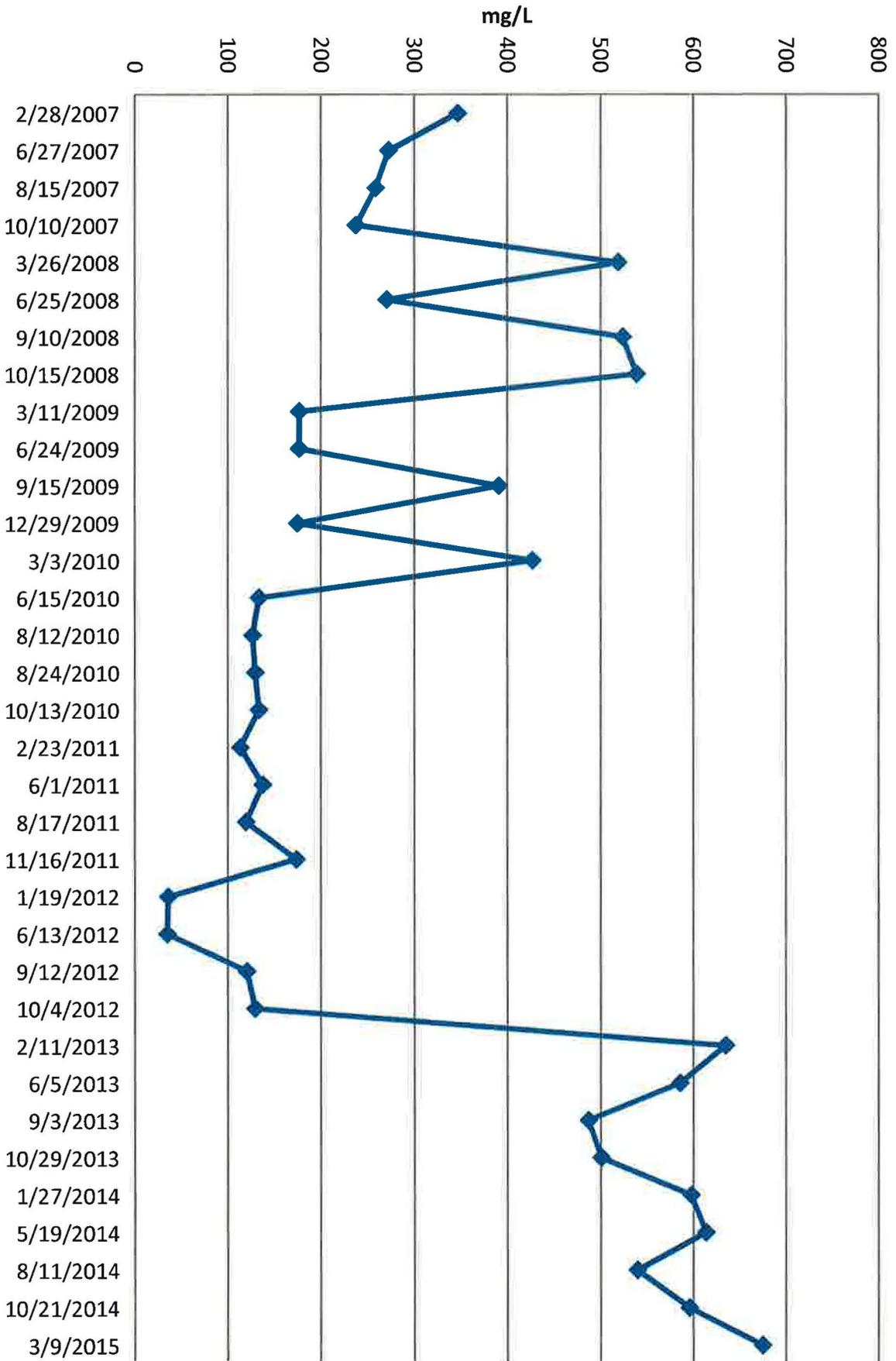
TW4-21 Chloride Concentrations



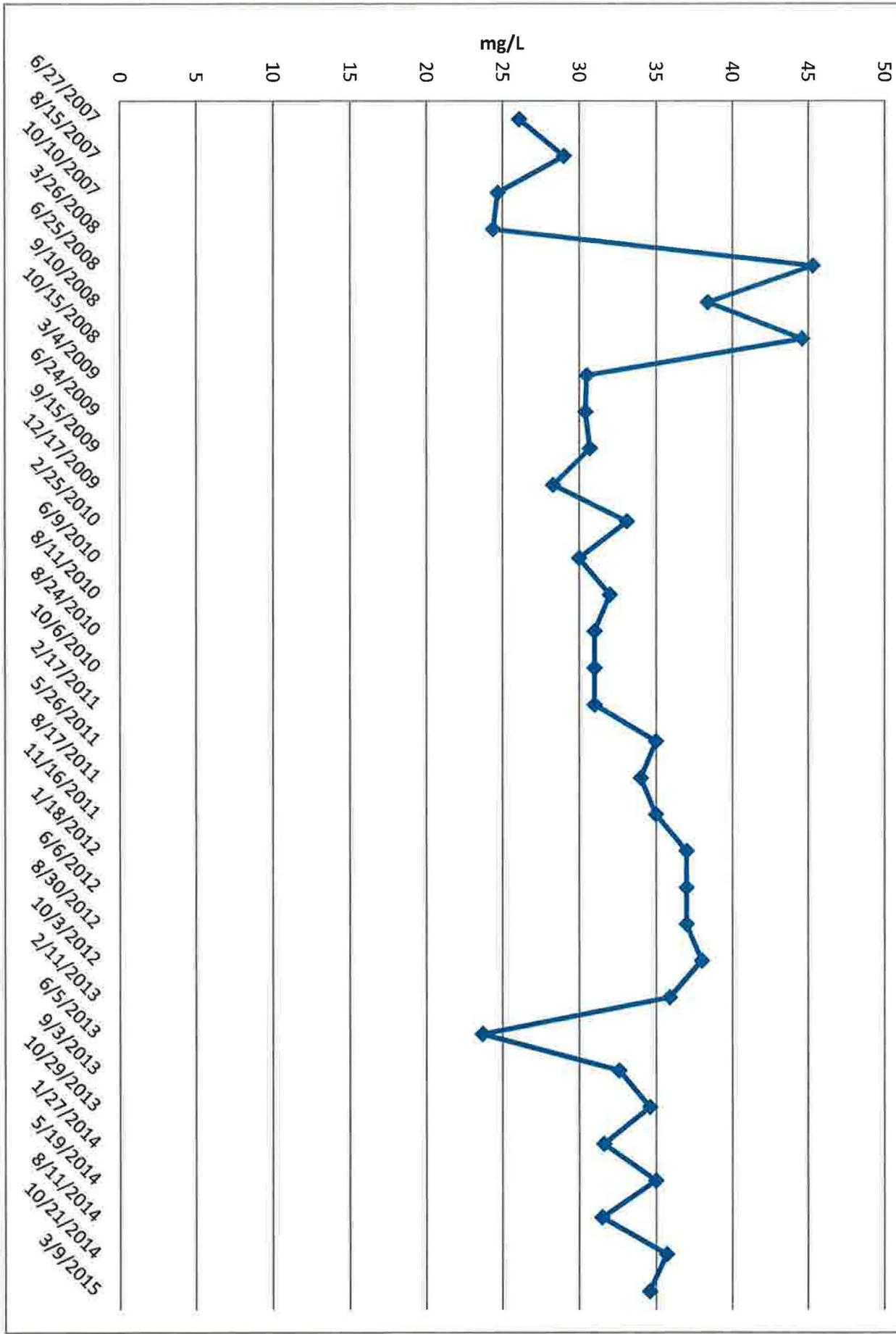
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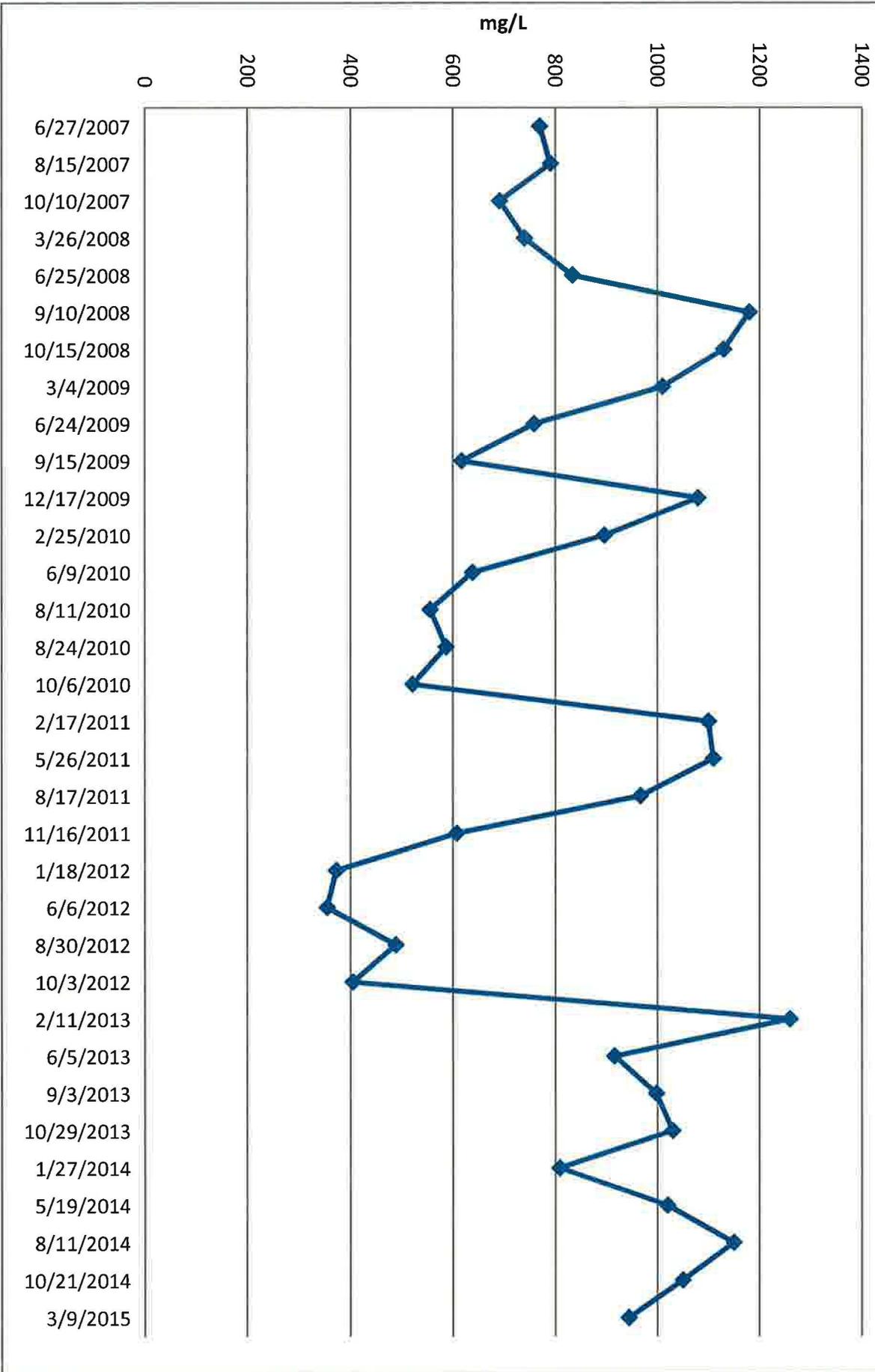
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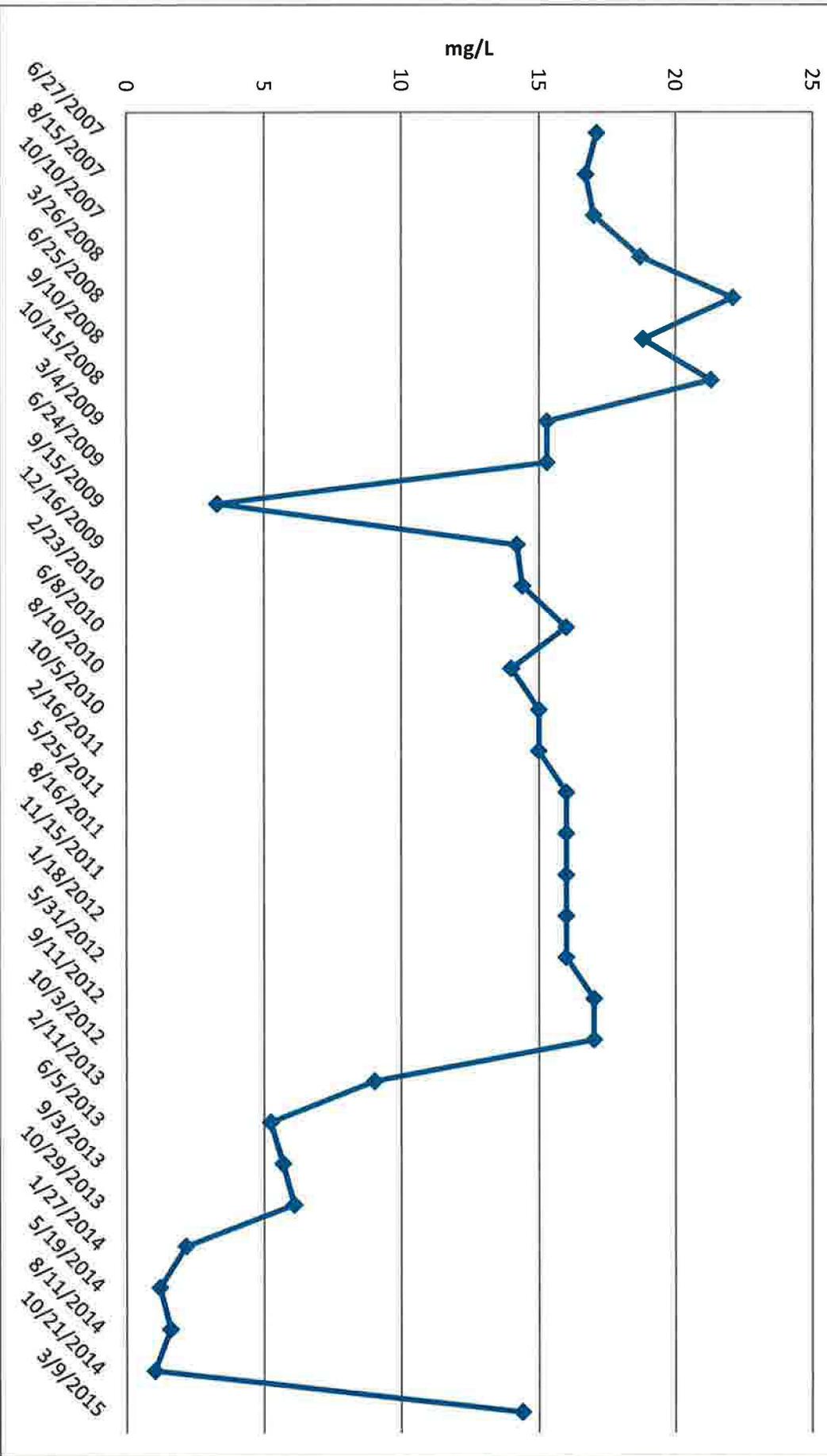
TW4-24 Nitrate Concentrations



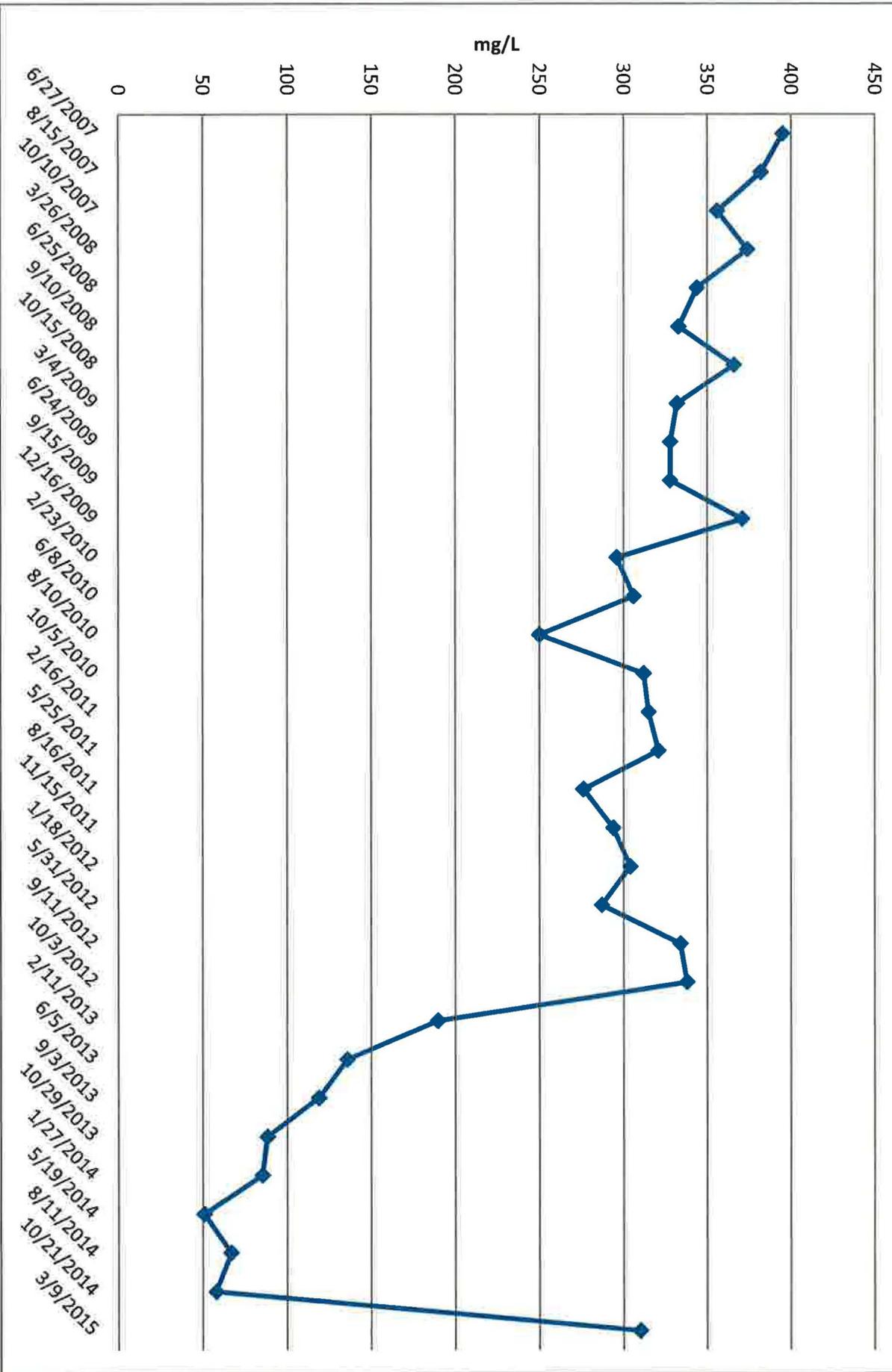
TW4-24 Chloride Concentrations



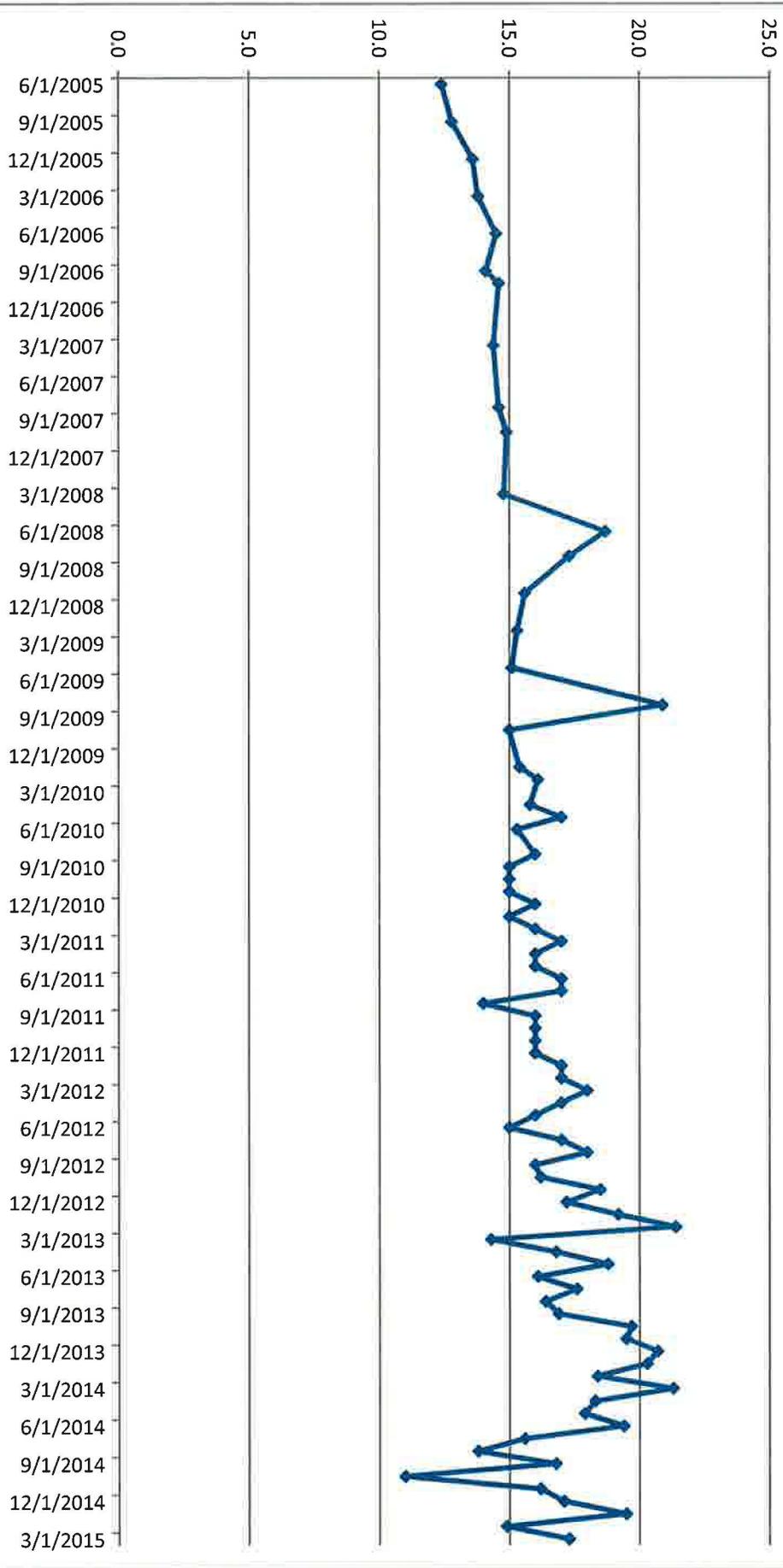
TW4-25 Nitrate Concentrations



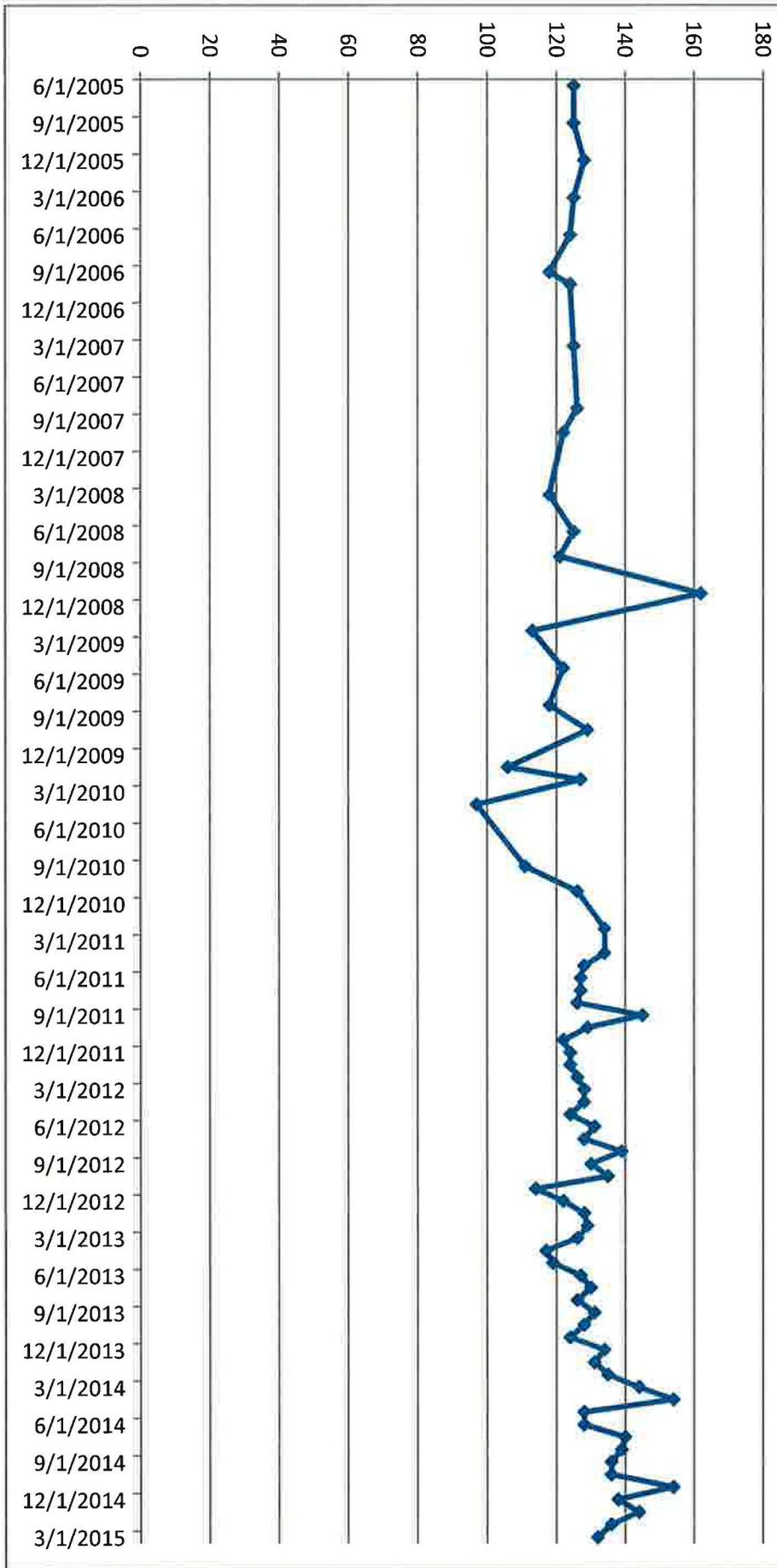
TW4-25 Chloride Concentrations



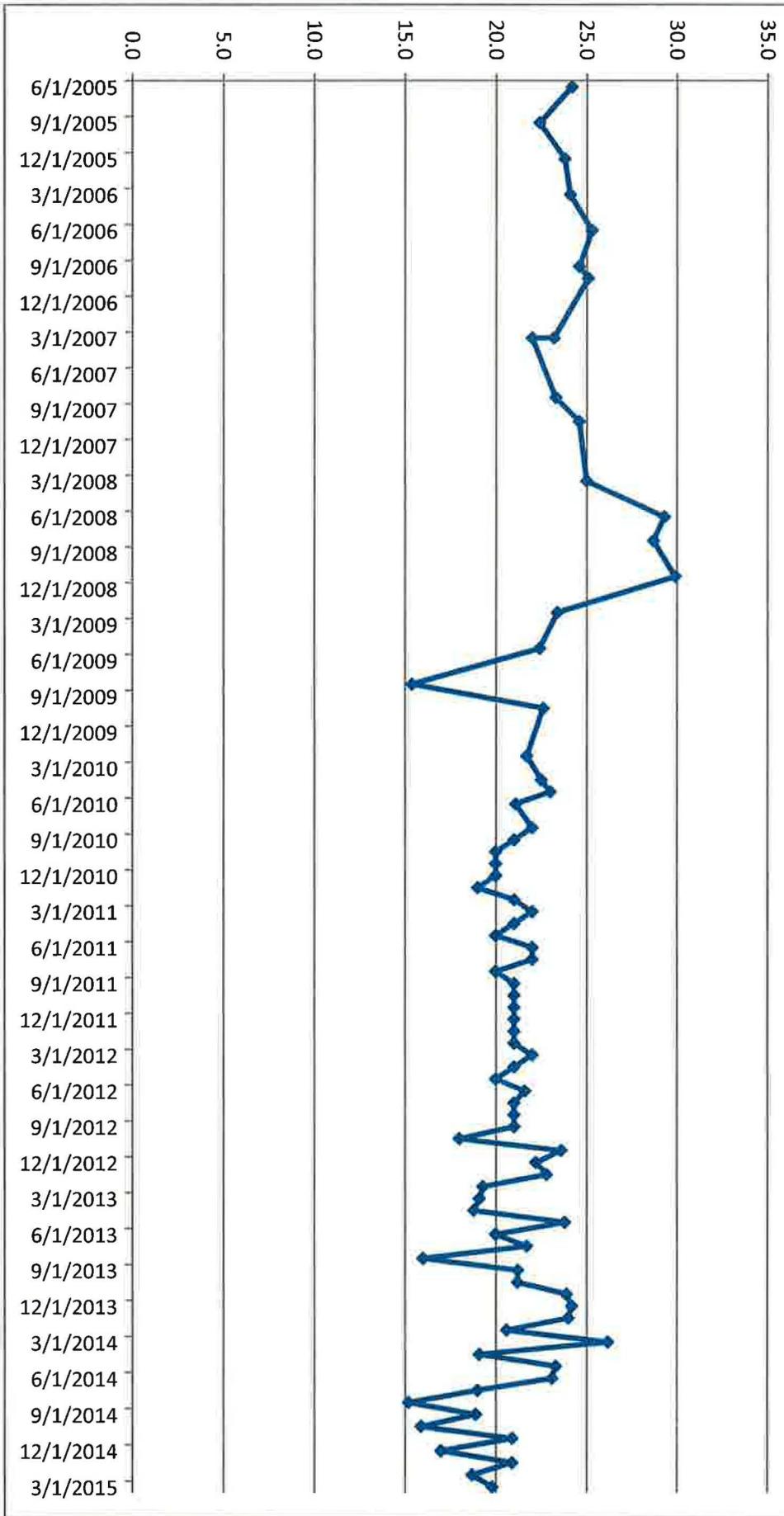
MW-30 Nitrate Concentrations



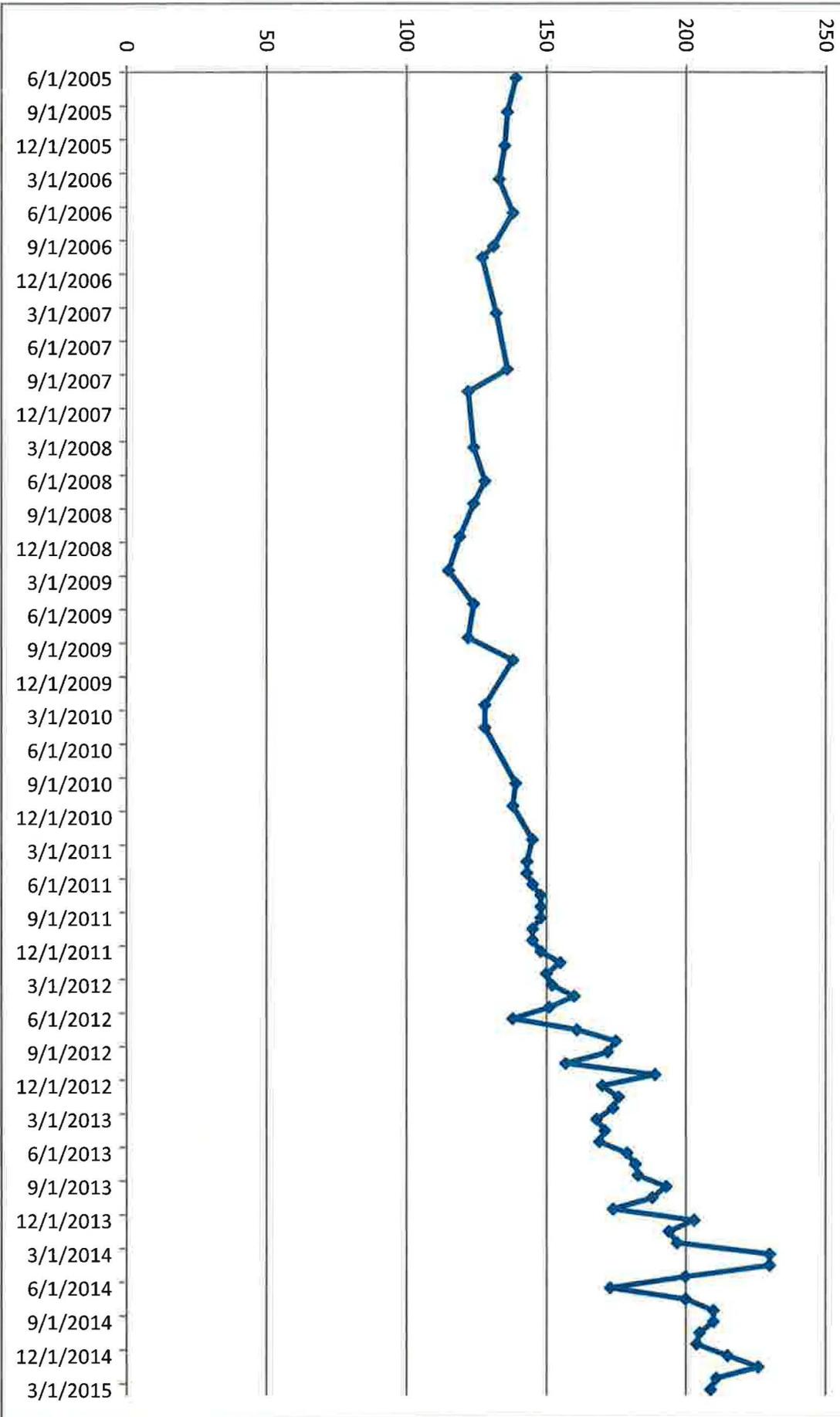
MW-30 Chloride Concentrations



MW-31 Nitrate Concentrations



MW-31 Chloride Concentrations



Tab L

CSV Transmittal Letter

Kathy Weinel

From: Kathy Weinel
Sent: Wednesday, May 20, 2015 7:33 AM
To: Rusty Lundberg (rlundberg@utah.gov)
Cc: 'Phil Goble'; 'Dean Henderson'; Harold Roberts; David Frydenlund; Scott Bakken; David Turk; Jaime Massey; Dan Hillsten; Logan Shumway
Subject: Transmittal of CSV Files White Mesa Mill 2015 Q1 Nitrate Monitoring
Attachments: 1502347-EDD.csv

Attached to this e-mail is an electronic copy of laboratory results for nitrate monitoring conducted at the White Mesa Mill during the first quarter of 2015, in Comma Separated Value (CSV) format.

Please contact me at 303-389-4134 if you have any questions on this transmittal.

Yours Truly

Kathy Weinel



Kathy Weinel
Quality Assurance Manager

t: 303.389.4134 | f: 303.389.4125
225 Union Blvd., Suite 600
Lakewood, CO 80228

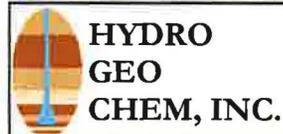
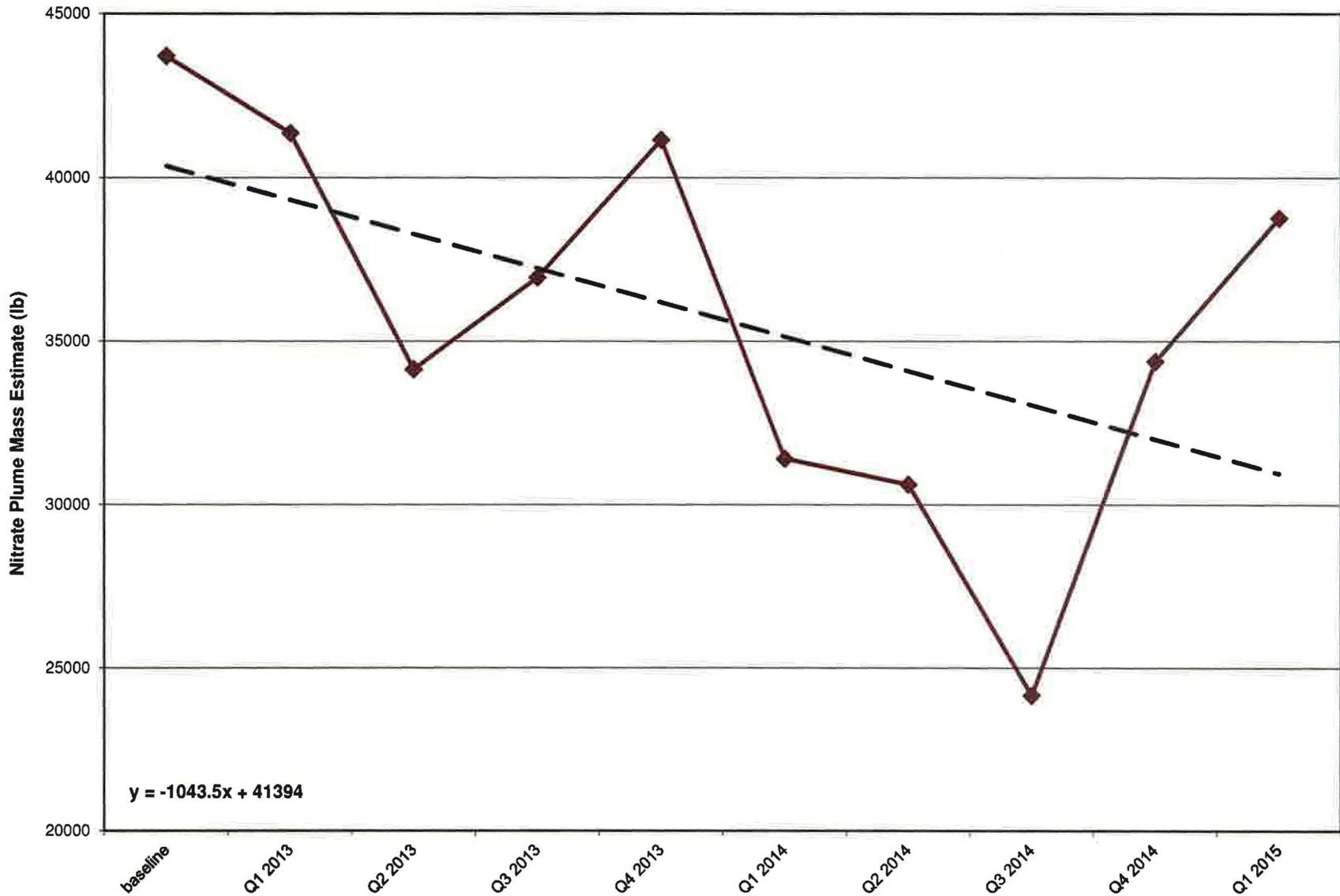
<http://www.energyfuels.com>

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Tab M Residual Mass Estimate Analysis Figures and Tables

Tab M – Figures

Tab M - Tables



Time Series of Nitrate Plume Mass Estimates

Approved	Date	Author	Date	File Name	Figure
		GEM	5/13/15	Nmasstrend0315.xls	M.1